

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Mik Uhlir Examiner #: 79075 Date: 10/9/02
 Art Unit: 1773 Phone Number 305 0179 Serial Number: 091581447
 Mail Box and Bldg/Room Location: 1103 CP3 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers; and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

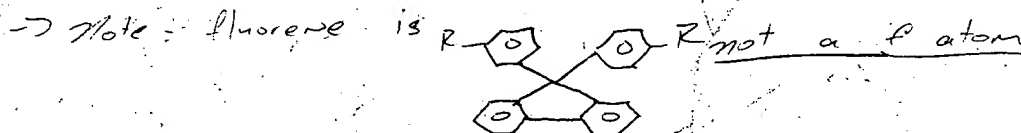
Title of Invention: Antireflection Material

Inventors (please provide full names): Chikara Murata; Kazuya Ohishi; Yasuhiko Matsunaga; Yomahise Taniguchi

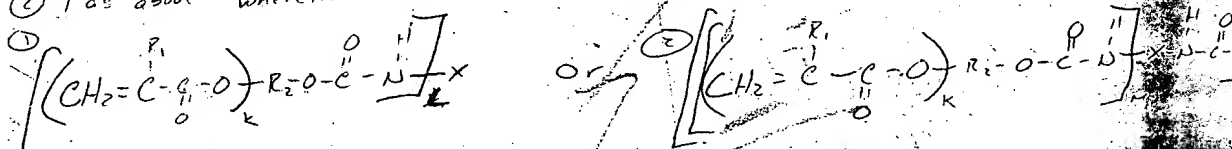
Earliest Priority Filing Date: 10/1998

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- ① a hard coat composition comprising a copolymer of a methacrylate having a fluorene (not fluorine) structure and a urethane methacrylate



- ② as above wherein the urethane acrylate has 1 of the following structures



where

$\text{R}_1 = \text{H or CH}_3$

x is isocyanate

$k = 1-5$

$L = 1-3$

$\gamma = \text{Polyhydric alcohol}$

$m = 1 \text{ or } 2$

$n = 1-6$

K, L, M, N can't both be 1

STAFF USE ONLY

Searcher: ED Type of Search: NA Sequence (#) Vendors and cost where applicable: \$91.30
 Searcher Phone #: STN:
 Searcher Location: AA Sequence (#): Dialog:
 Date Searcher Picked Up: Structure (#): Questel/Orbit:
 Date Completed: 10-15-02 Bibliographic: DyLink:
 Searcher Prep & Review Time: 5 Litigation: Lexis/Nexis:
 Clerical Prep Time: Fulltext: Sequence Systems:
 Online Time: 60 Patent Family: WWW/Internet:
 Other: Other (specify):

BEST AVAILABLE COPY

=> file reg

FILE 'REGISTRY' ENTERED AT 19:21:28 ON 15 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 14 OCT 2002 HIGHEST RN 461382-59-2
DICTIONARY FILE UPDATES: 14 OCT 2002 HIGHEST RN 461382-59-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 18:44:11 ON 15 OCT 2002)

FILE 'HCAPLUS' ENTERED AT 18:47:19 ON 15 OCT 2002

L1 18893 S MURATA ?/AU
L2 2384 S OHISHI ?/AU
L3 8681 S MATSUNAGA ?/AU
L4 89437 S YAMAMOTO ?/AU
L5 1 S L1 AND L2 AND L3 AND L4
SEL L5 1 RN

FILE 'REGISTRY' ENTERED AT 18:48:30 ON 15 OCT 2002

L6 10 S E1-E10
L7 8 S L6 AND PMS/CI
L8 2 S L6 NOT L7
E POLYURETHANE/PCT
L9 61398 S E3

FILE 'HCAPLUS' ENTERED AT 18:55:07 ON 15 OCT 2002

L10 20 S L8
L11 157432 S L9 OR POLYURETHAN## OR URETHAN##
L12 3 S L10 AND L11

FILE 'LREGISTRY' ENTERED AT 18:58:44 ON 15 OCT 2002

E FLUORENE/CN
L13 1 S E3
L14 257 S 1839.6.36/RID

FILE 'REGISTRY' ENTERED AT 19:00:08 ON 15 OCT 2002

L15 71468 S 1839.6.36/RID
E POLYACRYLIC/PCT
L16 267107 S E3
L17 396 S L15 AND L16
L18 33 S L17 AND L9
L19 1 S L18 AND L7

FILE 'HCAPLUS' ENTERED AT 19:03:29 ON 15 OCT 2002

L20 9 S L18
L21 230 S L17
L22 16 S L21 AND L11

FILE 'REGISTRY' ENTERED AT 19:04:13 ON 15 OCT 2002

L23 185 S L15 AND L9

FILE 'HCAPLUS' ENTERED AT 19:07:25 ON 15 OCT 2002

L24 53 S L23
L25 514286 S L16 OR ACRYLIC# OR POLYACRYLIC# OR METHACRYLIC# OR POLY
L26 15 S L24 AND L25
L27 9 S L22 AND L26

FILE 'LREGISTRY' ENTERED AT 19:10:14 ON 15 OCT 2002

FILE 'HCAPLUS' ENTERED AT 19:14:36 ON 15 OCT 2002

L28 109557 S ?ISOCYANAT?
L29 11 S L21 AND L28
L30 20 S (L20 OR L22 OR L26 OR L27 OR L29) NOT L12

FILE 'REGISTRY' ENTERED AT 19:21:28 ON 15 OCT 2002

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 19:23:15 ON 15 OCT 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Oct 2002 VOL 137 ISS 16

FILE LAST UPDATED: 14 Oct 2002 (20021014/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d l12 1-3 cbib abs hitstr hitind

L12 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

2000:260729 Document No. 132:286426 Antireflection material and polarizing film using same. Murata, Chikara; Ohishi, Kazuya; Matsunaga, Yasuhiro; Yamamoto, Tomohisa (Tomoe-gawa Paper Co., Ltd., Japan). PCT Int. Appl. WO 2000022461 A1 20000420, 63 pp. DESIGNATED STATES: W: KR, US. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1999-JP5668 19991014. PRIORITY: JP 1998-291757 19981014; JP 1998-322604 19981112; JP 1998-345420 19981204; JP 1999-286321 19991007.

AB An antireflection material comprises a transparent substrate, a hard coating process layer which is provided, directly or via another layer, on one or both surfaces of the substrate, and an antireflection coating process which is provided on the surface of the hard coating process layer and has a refractive index lower than that of the hard coating process layer, wherein the hard coating process layer comprises (1) a polymer contg. a (meth)acrylate compd. having a fluorene skeleton as a component thereof, or (2) a polymer contg. a **urethane** (meth)acrylate compd. as a component thereof and ultra fine particles having a high refractive index, or (3) a radiation- and/or heat-curing resin and surface treated ultra fine particles of titanium dioxide; and a polarizing film using the same. The antireflection material and the polarizing film having the acrylate polymer in the hard coat layer exhibit excellent antireflection properties and thus can be used for preventing an external light such as the sunshine and the light from a fluorescent lamp from reflecting into a display and providing a clear image free from screen glare or the like without lowering the contrast in an image, and further have good optical stability and excellent resistance to abrasion, chems. and stains.

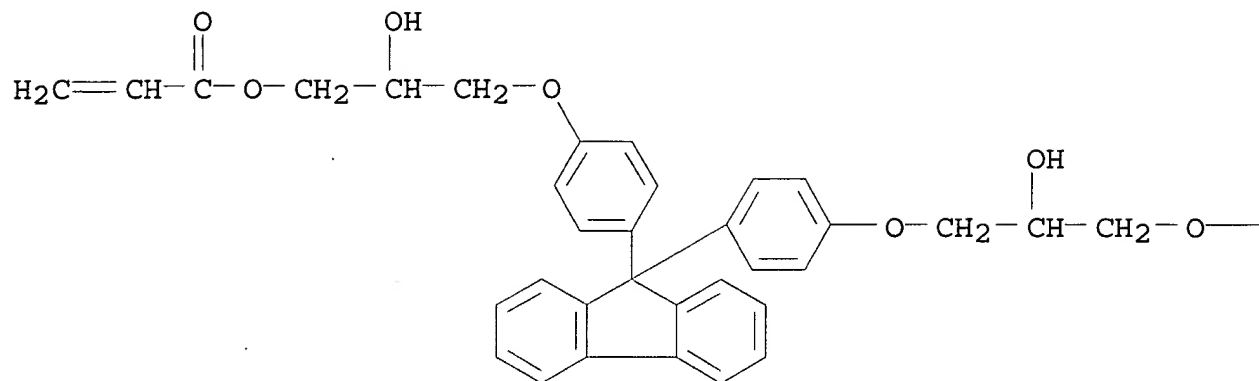
IT 143182-97-2P 161182-73-6P 253598-96-8P
253598-97-9P

(acrylic polymer in hard coat layer of antireflection material)

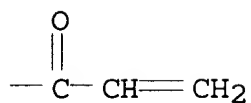
RN 143182-97-2 HCAPLUS

CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A

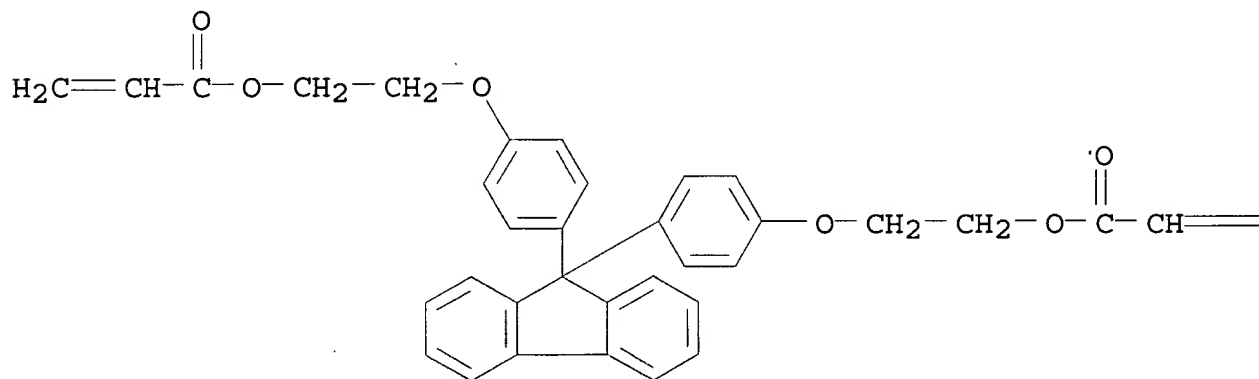


PAGE 1-B



RN 161182-73-6 HCAPLUS
 CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

 =CH_2

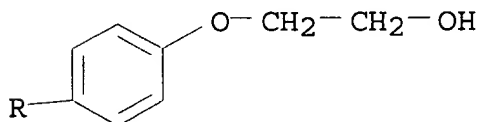
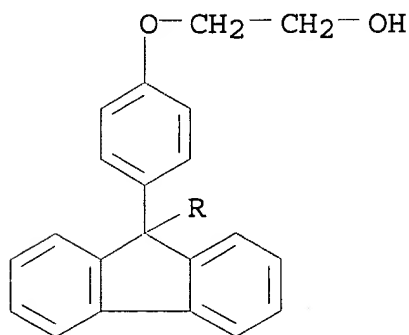
RN 253598-96-8 HCAPLUS

CN 2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[ethanol], 1,1'-methylenebis[4-isocyanatobenzene] and 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 117344-32-8

CMF C29 H26 O4

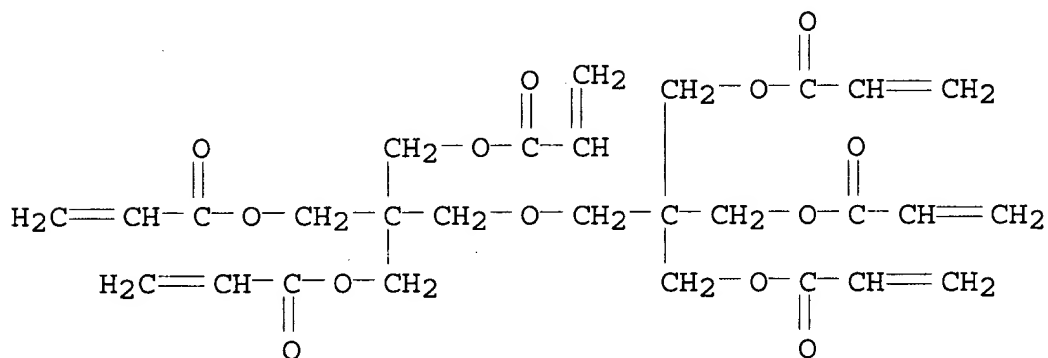
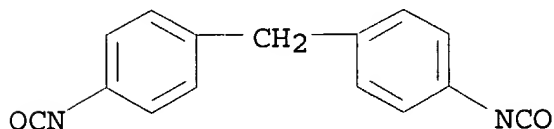


CM 2

CRN 60506-81-2

$$\begin{array}{c}
 \text{H}_2\text{C}=\text{CH}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\overset{\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\overset{\text{CH}_2}{\overset{\text{CH}}{\overset{\text{CH}_2}{\parallel}}}}{\overset{\text{CH}_2}{\overset{\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{CH}=\text{CH}_2}}}{\overset{\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{CH}=\text{CH}_2}}{\overset{\text{O}}{\overset{\parallel}{\text{C}}}} \\
 \text{H}_2\text{C}=\text{CH}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\overset{\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{CH}=\text{CH}_2}{\overset{\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\text{CH}=\text{CH}_2}{\overset{\text{O}}{\overset{\parallel}{\text{C}}}}}
 \end{array}$$

CMF C28 H34 O13

CMF C15 H10 N2 O2

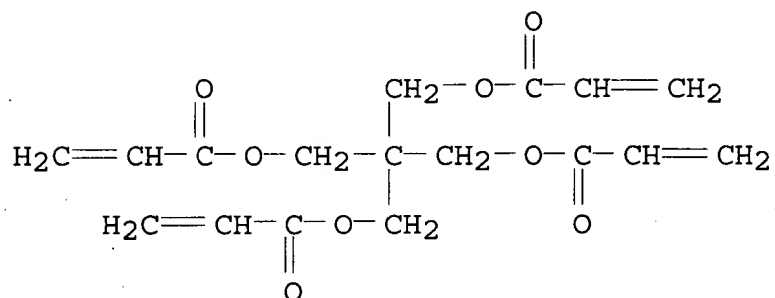
CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[[(1-oxo-2-

propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate and
1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

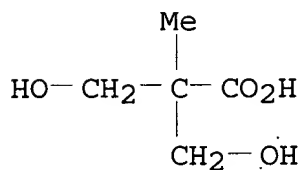
CMF C17 H20 O8



CM 2

CRN 4767-03-7

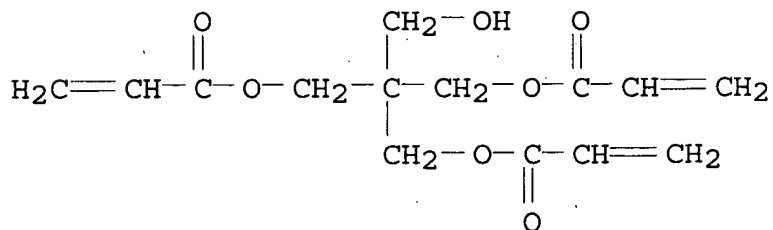
CMF C5 H10 O4



CM 3

CRN 3524-68-3

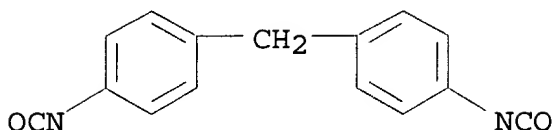
CMF C14 H18 O7



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



IC ICM G02B001-11
 ICS C09D133-06; C08F290-06; C08F220-30; C08F220-36
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 42
 IT 111965-92-5P 143182-97-2P 161182-73-6P
 253598-90-2P 253598-91-3P 253598-92-4P 253598-93-5P
 253598-96-8P 253598-97-9P 263911-09-7P
 (acrylic polymer in hard coat layer of antireflection material)

L12 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
 2000:25655 Document No. 132:79818 Scratch-resistant resin compositions
 having high refractive indexes. Kuragaki, Kenji (Kyoeisha Chemical
 Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000007741 A2
 20000111, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1998-178585 19980625.

AB Resin compns. contain (meth)acrylates having fluorene skeletons,
 such as bisphenoxyethanolfluorene diacrylate (I), urethane,
~~(meth)acrylates,~~ and polymn. initiators. Thus,
 bisphenoxyethanolfluorene was esterified with acrylic acid to give
 I, mixed (70 parts) with 30 parts HMDI-pentaerythritol
 tetraacrylate-pentaerythritol triacrylate reaction product,
 solvents, hydroquinone mono-Me ether, and hydroxycyclohexyl Ph
 ketone, coated on a PET film, and irradiated with UV to form a
 coating having n 1.6060 and pencil hardness 2H.

IT 253599-04-1P 253599-05-2P 253787-63-2P

(UV-curable resin compns. contg. fluorene (meth)acrylates and
urethane (meth)acrylates for scratch-resistant coatings
 having high refractive indexes)

RN 253599-04-1 HCAPLUS

CN 2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-
 propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-
 propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with
 2,2'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[ethanol],
 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl)
 di-2-propenoate, 1,1'-methylenebis[4-isocyanatobenzene] and
 2-[[[3-[[[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-
 propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-
 propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA
 INDEX NAME)

check
out
date
is
prob.
bad.
Published
11/1/00
IT

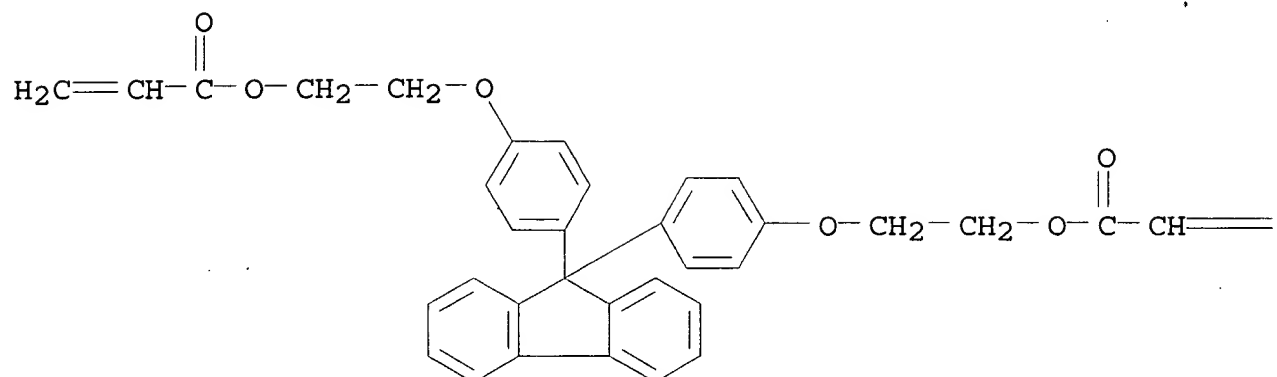
Bad date

CM 1

CRN 161182-73-6

CMF C35 H30 O6

PAGE 1-A



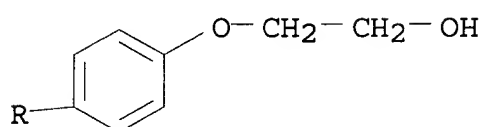
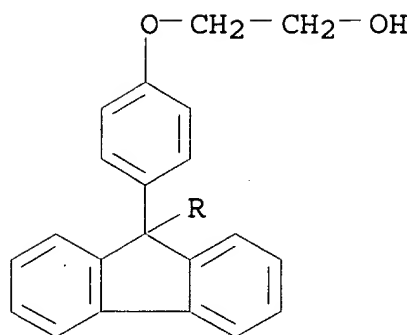
PAGE 1-B

 =CH_2

CM 2

CRN 117344-32-8

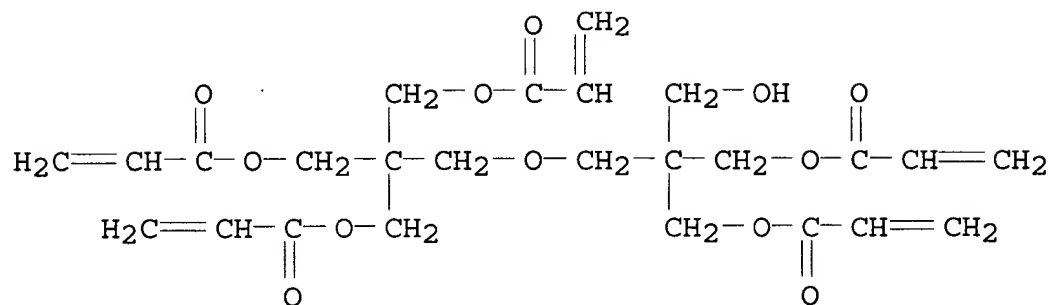
CMF C29 H26 O4



CM 3

CRN 60506-81-2

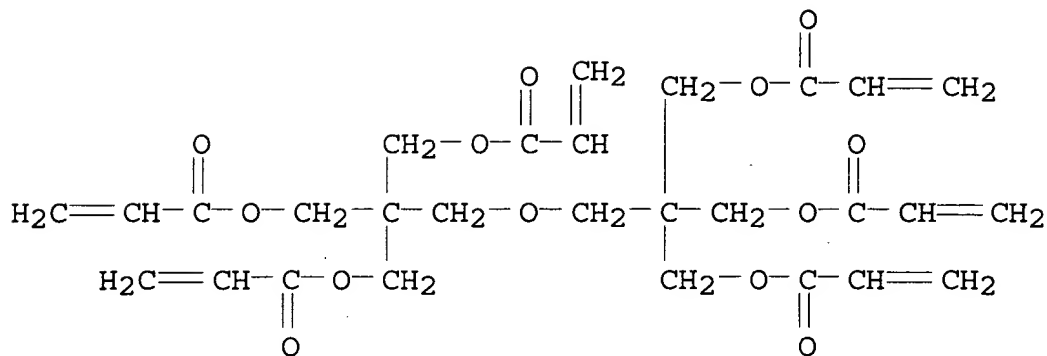
CMF C25 H32 O12



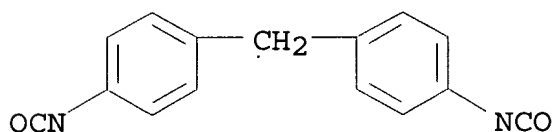
CM 4

CRN 29570-58-9

CMF C28 H34 O13



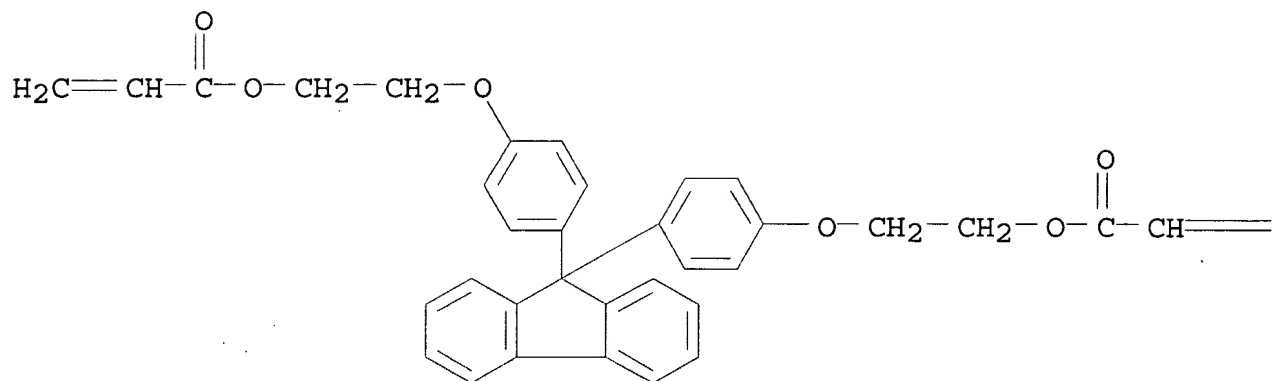
CMF C15 H10 N2 O2



CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl) di-2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CMF C35 H30 06

PAGE 1-A



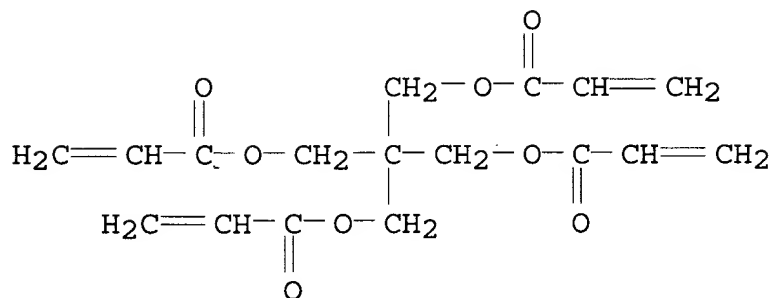
PAGE 1-B

= CH₂

CM 2

CRN 4986-89-4

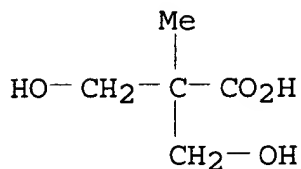
CMF C17 H20 O8



CM 3

CRN 4767-03-7

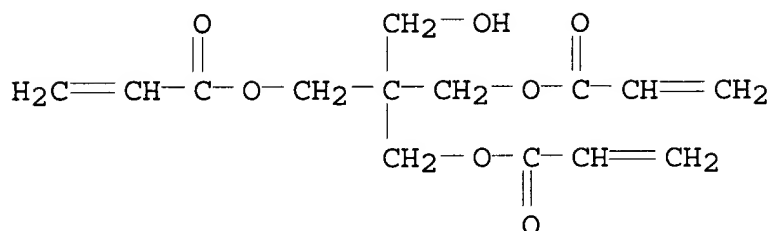
CMF C5 H10 O4



CM 4

CRN 3524-68-3

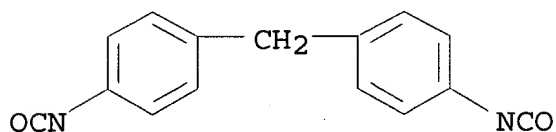
CMF C14 H18 O7



CM 5

CRN 101-68-8

CMF C15 H10 N2 O2



RN 253787-63-2 HCAPLUS

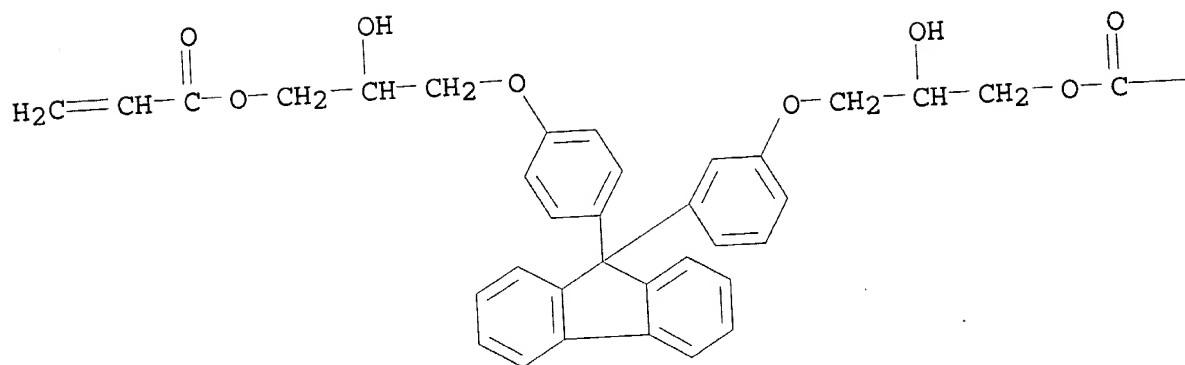
CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-hydroxy-3-[3-[9-[4-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]phenyl]-9H-fluoren-9-yl]phenoxy]propyl 2-propenoate, 2-(hydroxymethyl)-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

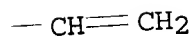
CRN 253598-89-9

CMF C37 H34 O8

PAGE 1-A

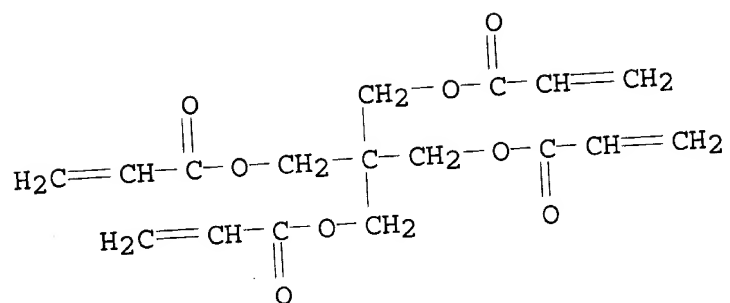


PAGE 1-B



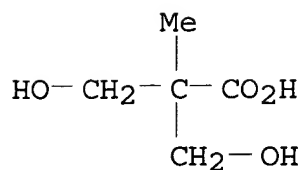
CM 2

CRN 4986-89-4
CMF C17 H20 O8



CM 3

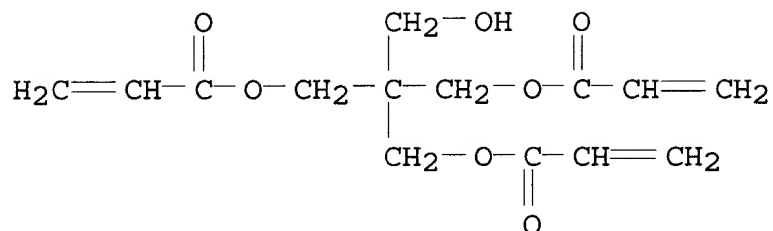
CRN 4767-03-7
CMF C5 H10 O4



CM 4

CRN 3524-68-3

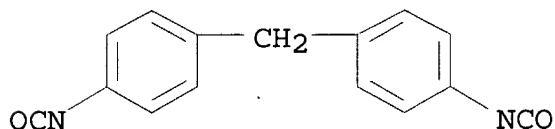
CMF C14 H18 O7



CM 5

CRN 101-68-8

CMF C15 H10 N2 O2



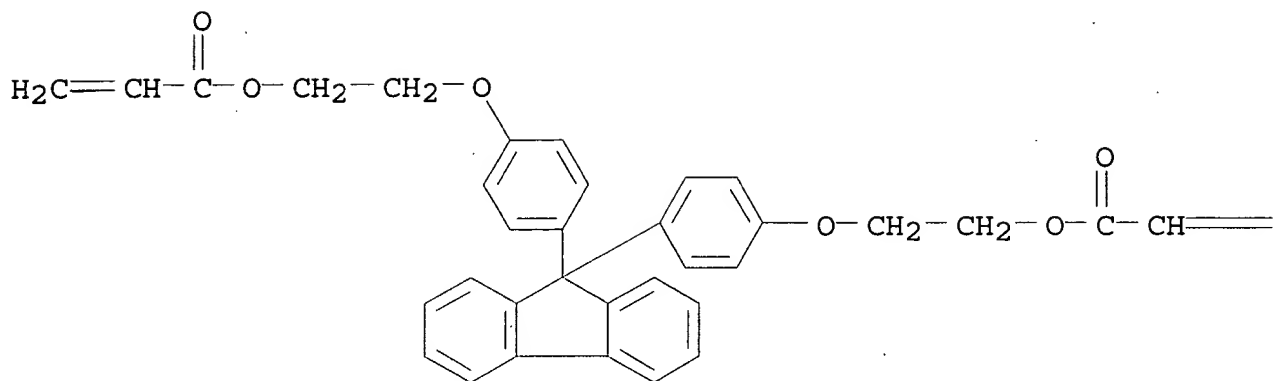
IT 161182-73-6P 253598-96-8P 253598-97-9P

(UV-curable resin compns. contg. fluorene (meth)acrylates and
urethane (meth)acrylates for scratch-resistant coatings
 having high refractive indexes)

RN 161182-73-6 HCAPLUS

CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-
 ethanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

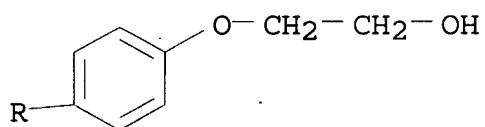
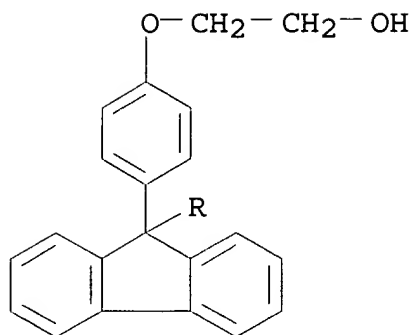
= CH₂

RN 253598-96-8 HCAPLUS
 CN 2-Propenoic acid, 2-[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[ethanol], 1,1'-methylenebis[4-isocyanatobenzene] and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 117344-32-8

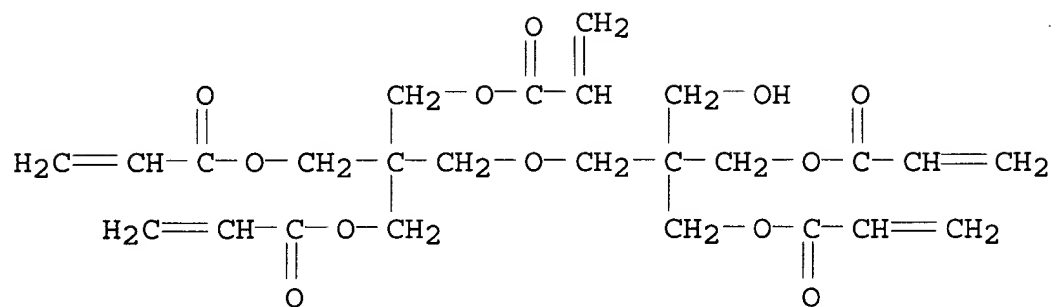
CMF C29 H26 O4



CM 2

CRN 60506-81-2

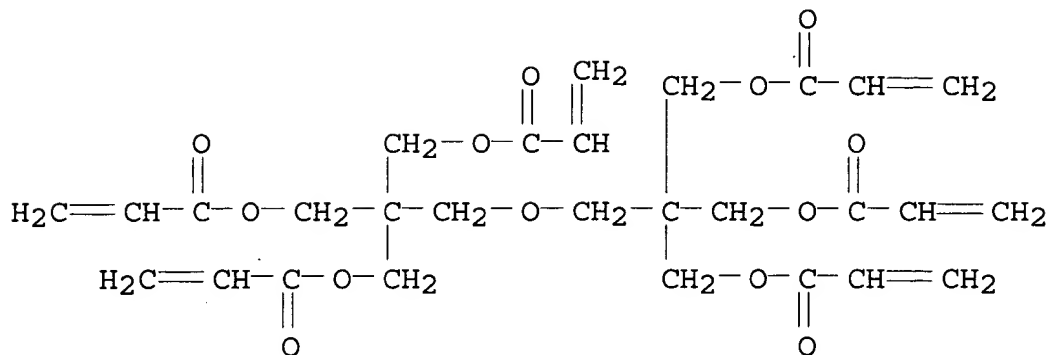
CMF C25 H32 O12



CM 3

CRN 29570-58-9

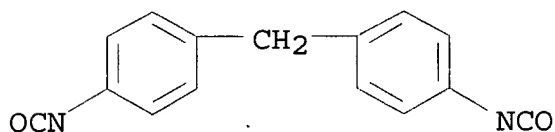
CMF C28 H34 O13



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



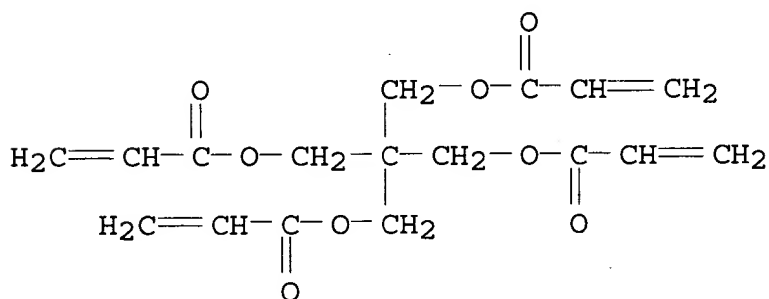
RN 253598-97-9 HCAPLUS

CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

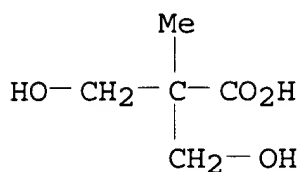
CMF C17 H20 O8



CM 2

CRN 4767-03-7

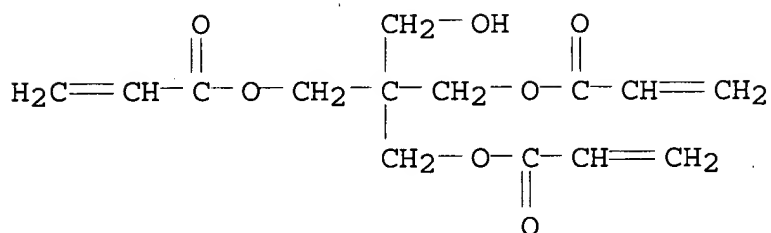
CMF C5 H10 O4



CM 3

CRN 3524-68-3

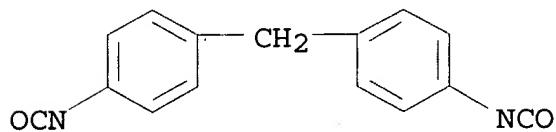
CMF C14 H18 O7



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



IC ICM C08F290-06
 ICS C08F220-30; C08F220-36; C08F299-02; C09D004-02; C09D005-00;
 G02B001-10
 CC 42-10 (Coatings, Inks, and Related Products)
 ST phenoxyethanolfluorene acrylate **urethane** methacrylate
 copolymer; scratch resistant coating refractive index; UV
 crosslinking scratch resistant coating
 IT Esterification
 Refractive index

- UV radiation
(UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT **Polyurethanes**, preparation
(acrylic; UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT Crosslinking catalysts
(photochem.; UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT Acrylic polymers, preparation
(**polyurethane**-; UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT Coating materials
(scratch-resistant; UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone
(UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT 253598-98-0P 253598-99-1P 253599-00-7P 253599-01-8P
253599-02-9P 253599-03-0P **253599-04-1P**
253599-05-2P 253599-08-5P 253774-78-6P
253787-63-2P
(UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT 111965-92-5P **161182-73-6P** 253598-89-9P 253598-90-2P,
Dipentaerythritol hexaacrylate-dipentaerythritol
pentaacrylate-hexamethylene diisocyanate copolymer 253598-91-3P,
Pentaerythritol tetracrylate-pentaerythritol triacrylate-2,4-
tolylene diisocyanate copolymer 253598-92-4P, MDI-pentaerythritol
tetracrylate-pentaerythritol triacrylate copolymer 253598-93-5P,
Pentaerythritol tetracrylate-pentaerythritol triacrylate-xylylene
diisocyanate copolymer 253598-94-6P, Dipentaerythritol
hexaacrylate-dipentaerythritol pentaacrylate-hexamethylene
diisocyanate trimer copolymer 253598-95-7P, Dipentaerythritol
hexaacrylate-dipentaerythritol pentaacrylate-isophorone diisocyanate
isocyanurate copolymer **253598-96-8P 253598-97-9P**
(UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)
- IT 3236-71-3
(UV-curable resin compns. contg. fluorene (meth)acrylates and **urethane** (meth)acrylates for scratch-resistant coatings having high refractive indexes)

1993:23829 Document No. 118:23829 Radiation-curable
polyurethane coating. Klun, Thomas P.; Lu, David D.;
Robbins, Aida F. (Minnesota Mining and Mfg. Co., USA). U.S. US
5109097 A 19920428, 23 pp. (English). CODEN: USXXAM.
APPLICATION: US 1990-578476 19900907.

AB Abrasion- and solvent-resistant sandable coating materials for
substrates like wood surfaces are prepd. from compns. having
polyethylenically-unsatd. cardo **polyurethanes**. Thus, a
polyurethane (glass temp. 52-66.degree.) was prepd. by the
reaction of 9,9-bis(4-methylaminophenyl)fluorene 0.1, bisphenol A
diglycidyl ether (I) diacrylate 0.25, 2:1:1 mixt. of I acrylate
stearate-I diacrylate-I distearate 0.05, and Desmodur W 0.35 equiv.
in BuOAc in the presence of Bu₂Sn dilaurate. A coating, prepd. by
dilg. I with BuOAc-PrOAc-PrOH mixt. contg. photoinitiator, was
sprayed on wood and cured (2 J/cm²) to give solvent-resistant
coatings.

IT 143186-23-6P 143186-24-7P 143186-25-8P
143186-26-9P 143186-27-0P 143186-28-1P
143186-29-2P 143186-30-5P 143186-31-6P
143186-32-7P 143186-33-8P 143186-34-9P
143186-35-0P 143186-36-1P 143187-24-0P
143206-09-1P

(prepn. of, coatings, photocurable)

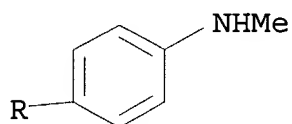
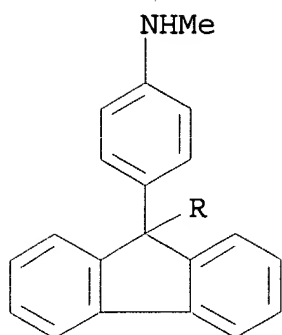
RN 143186-23-6 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with
(chloromethyl)oxirane, di-2-propenoate, polymer with
(chloromethyl)oxirane polymer with 4,4'-(1-
methylethylidene)bis[phenol] octadecanoate 2-propenoate,
4,4'-(9H-fluoren-9-ylidene)bis[N-methylbenzenamine] and
1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 107934-56-5

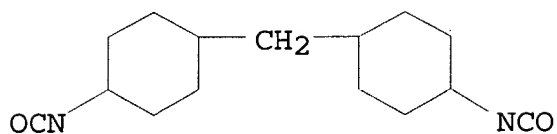
CMF C27 H24 N2



CM 2

CRN 5124-30-1

CMF C15 H22 N2 O2



CM 3

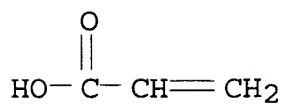
CRN 66746-11-0

CMF C18 H36 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

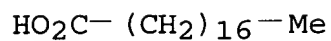
CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 57-11-4
 CMF C18 H36 O2

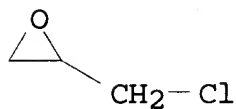


CM 6

CRN 25068-38-6
 CMF (C15 H16 O2 . C3 H5 Cl O)x
 CCI PMS

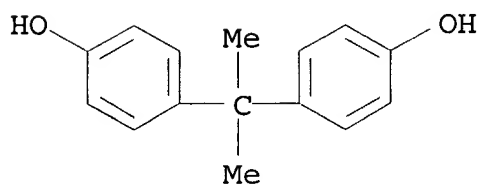
CM 7

CRN 106-89-8
 CMF C3 H5 Cl O



CM 8

CRN 80-05-7
 CMF C15 H16 O2



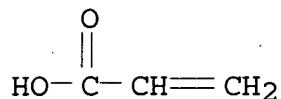
CM 9

CRN 53814-24-7
 CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 10

CRN 79-10-7

CMF C3 H4 O2



CM 11

CRN 25068-38-6

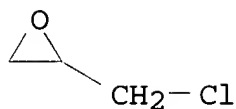
CMF (C15 H16 O2 . C3 H5 Cl O) x

CCI PMS

CM 12

CRN 106-89-8

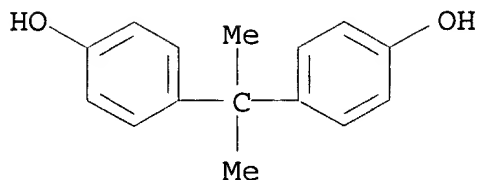
CMF C3 H5 Cl O



CM 13

CRN 80-05-7

CMF C15 H16 O2

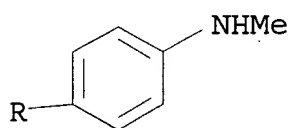
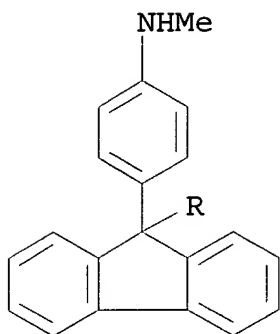


RN 143186-24-7 HCAPLUS

CN Phenol, 4,4'-(1-methylethylene)bis-, polymer with
 (chloromethyl)oxirane, di-2-propenoate, polymer with
 (chloromethyl)oxirane polymer with 4,4'-(1-
 methylethylidene)bis[phenol] octadecanoate 2-propenoate, Desmodur W
 and 4,4'-(9H-fluoren-9-ylidene)bis[N-methylbenzenamine] (9CI) (CA
 INDEX NAME)

CM 1

CRN 107934-56-5
CMF C27 H24 N2



CM 2

CRN 79103-62-1
CMF Unspecified
CCI MAN

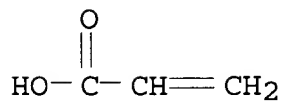
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 66746-11-0
CMF C18 H36 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

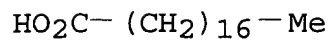
CM 4

CRN 79-10-7
CMF C3 H4 O2



CM 5

CRN 57-11-4
CMF C18 H36 O2

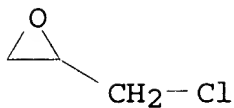


CM 6

CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS

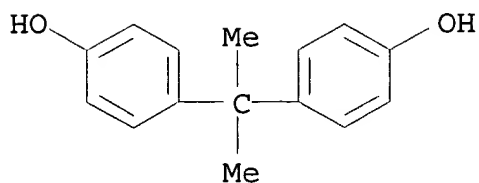
CM 7

CRN 106-89-8
CMF C3 H5 Cl O



CM 8

CRN 80-05-7
CMF C15 H16 O2

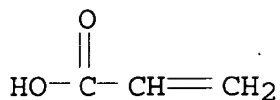


CM 9

CRN 53814-24-7
CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 10

CRN 79-10-7
CMF C3 H4 O2



CM 11

CRN 25068-38-6

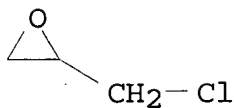
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 12

CRN 106-89-8

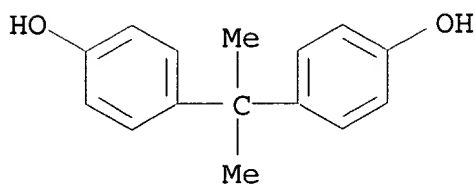
CMF C3 H5 Cl O



CM 13

CRN 80-05-7

CMF C15 H16 O2



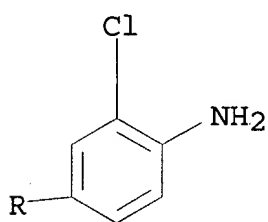
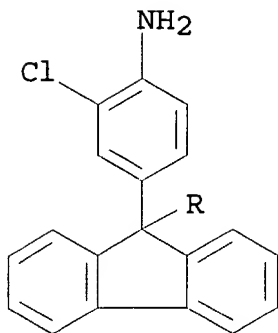
RN 143186-25-8 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with
 (chloromethyl)oxirane, di-2-propenoate, polymer with
 4,4'-(9H-fluoren-9-ylidene)bis[2-chlorobenzenamine] and
 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 107934-68-9

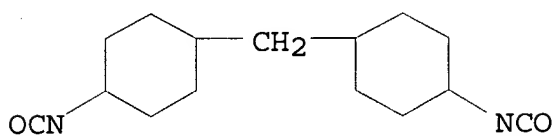
CMF C25 H18 Cl2 N2



CM 2

CRN 5124-30-1

CMF C15 H22 N2 O2



CM 3

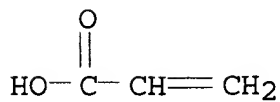
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

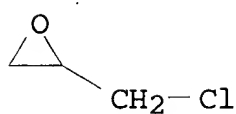
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

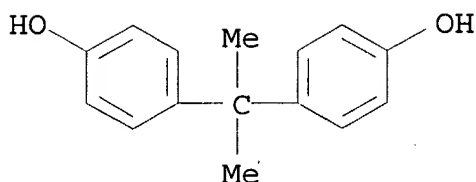
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



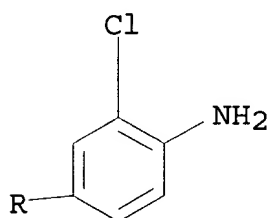
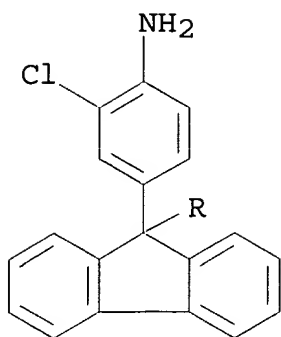
RN 143186-26-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, di-2-propenoate, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] octadecanoate 2-propenoate, 4,4'-(9H-fluoren-9-ylidene)bis[2-chlorobenzenamine] and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 107934-68-9

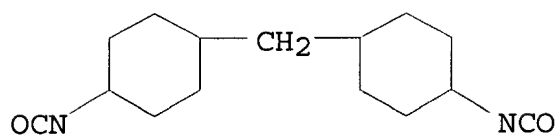
CMF C25 H18 Cl2 N2



CM 2

CRN 5124-30-1

CMF C15 H22 N2 O2



CM 3

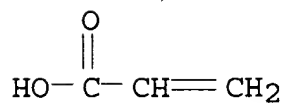
CRN 66746-11-0

CMF C18 H36 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

CRN 79-10-7

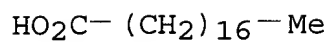
CMF C3 H4 O2



CM 5

CRN 57-11-4

CMF C18 H36 O2



CM 6

CRN 25068-38-6

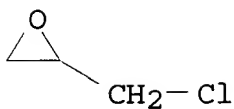
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 106-89-8

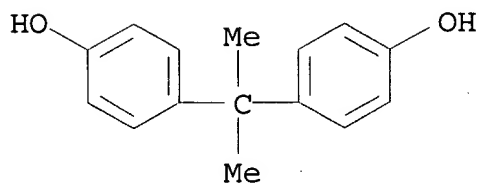
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

CMF C15 H16 O2



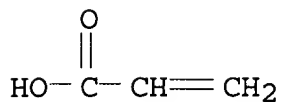
CM 9

CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 10

CRN 79-10-7
CMF C3 H4 O2

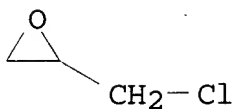


CM 11

CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS

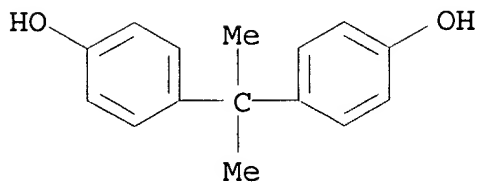
CM 12

CRN 106-89-8
CMF C3 H5 Cl O



CM 13

CRN 80-05-7
CMF C15 H16 O2



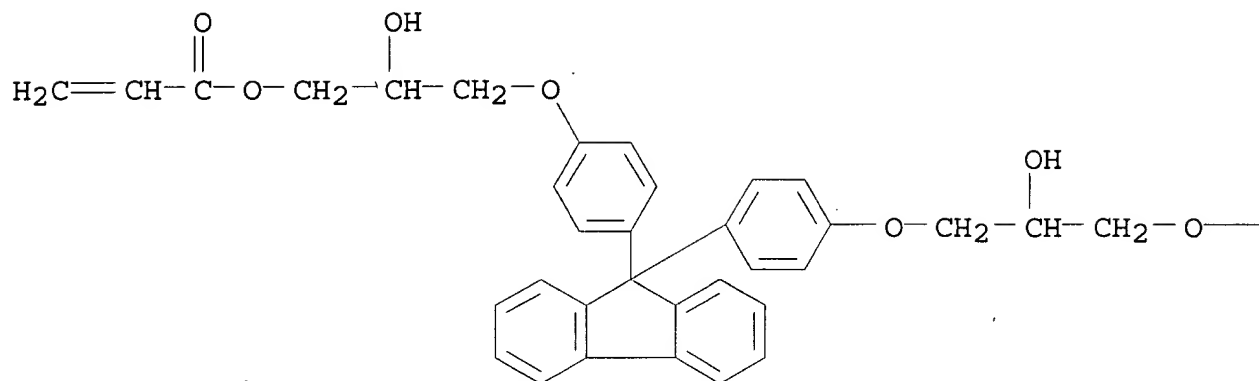
RN 143186-27-0 HCAPLUS
CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

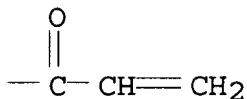
CRN 143182-97-2

CMF C37 H34 O8

PAGE 1-A



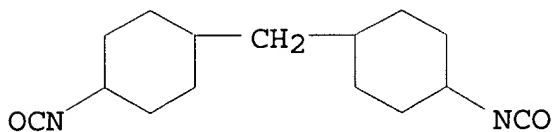
PAGE 1-B



CM 2

CRN 5124-30-1

CMF C15 H22 N2 O2



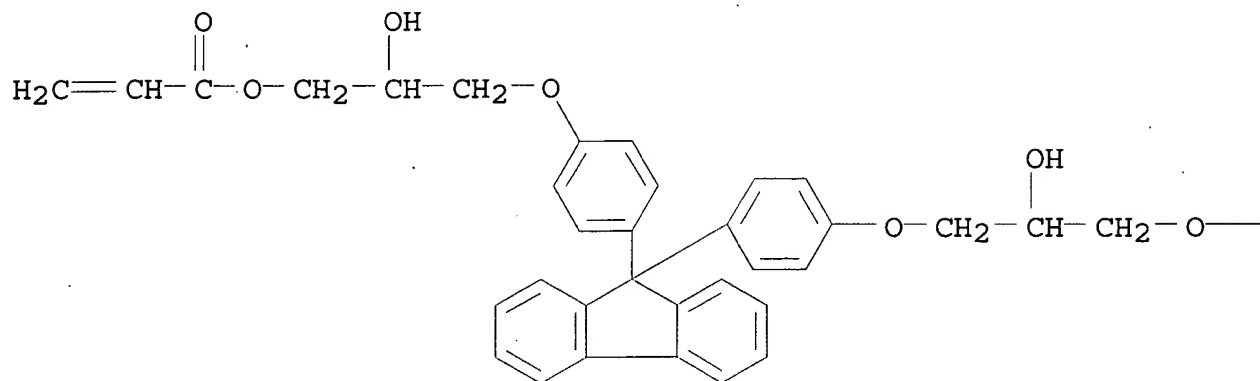
RN 143186-28-1 HCAPLUS

CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

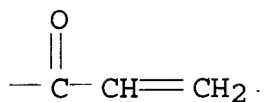
CM 1

CRN 143182-97-2
CMF C37 H34 O8

PAGE 1-A

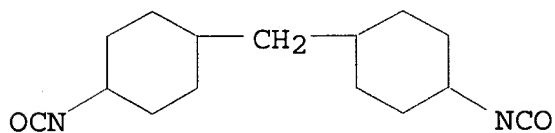


PAGE 1-B



CM 2

CRN 5124-30-1
CMF C15 H22 N2 O2

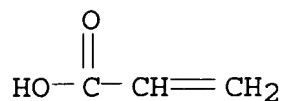


CM 3

CRN 53814-24-7
CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7
CMF C3 H4 O2

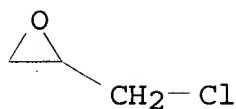


CM 5

CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS

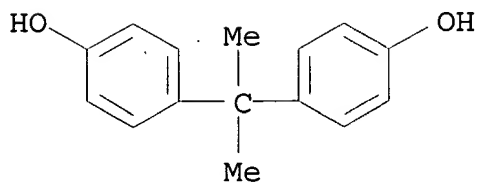
CM 6

CRN 106-89-8
CMF C3 H5 Cl O



CM 7

CRN 80-05-7
CMF C15 H16 O2

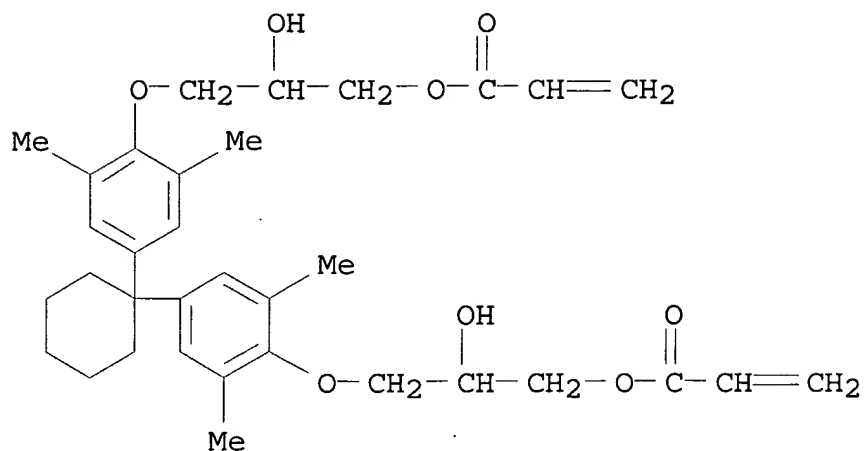


RN 143186-29-2 HCAPLUS
CN 2-Propenoic acid, cyclohexylidenebis[(2,6-dimethyl-4,1-phenylene)oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 143182-98-3

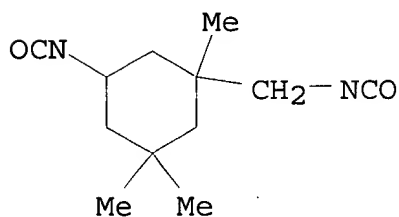
CMF C34 H44 O8



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



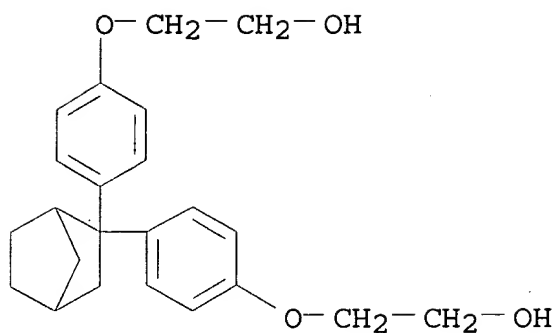
RN 143186-30-5 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with
 (chloromethyl)oxirane, di-2-propenoate, polymer with
 2,2'-[bicyclo[2.2.1]hept-2-ylidenebis(4,1-phenyleneoxy)]bis[ethanol]
 and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane
 (9CI) (CA INDEX NAME)

CM 1

CRN 47522-51-0

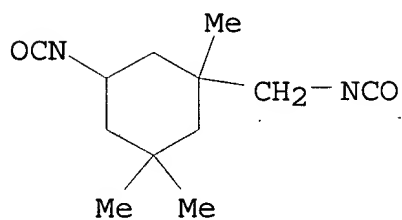
CMF C23 H28 O4



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

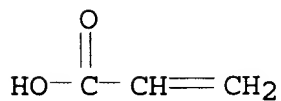
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

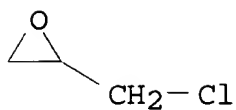
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

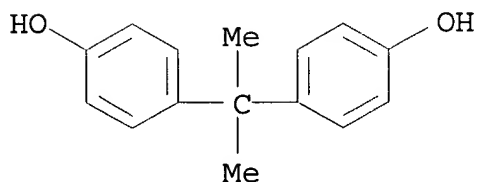
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



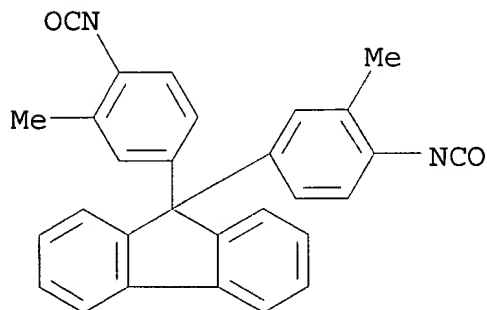
RN 143186-31-6 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, di-2-propenoate, polymer with 9,9-bis(4-isocyanato-3-methylphenyl)-9H-fluorene and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 143182-94-9

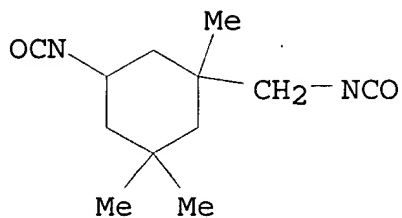
CMF C29 H20 N2 O2



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

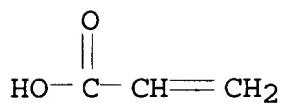
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

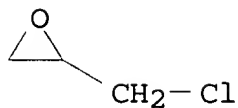
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

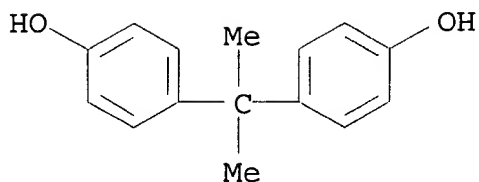
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



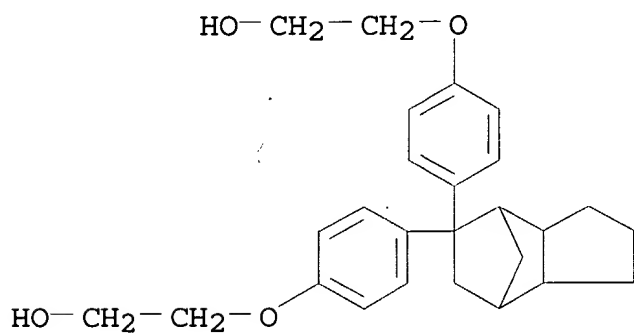
RN 143186-32-7 HCAPLUS

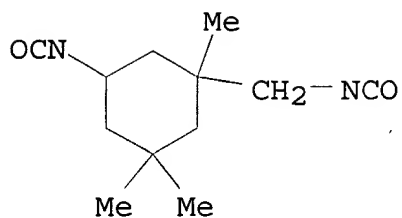
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with
 (chloromethyl)oxirane, di-2-propenoate, polymer with
 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and
 2,2'-[(octahydro-4,7-methano-5H-inden-5-ylidene)bis(4,1-
 phenyleneoxy)]bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 99377-83-0

CMF C26 H32 O4





CM 3

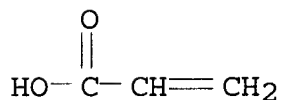
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

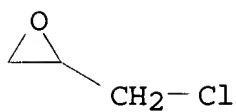
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

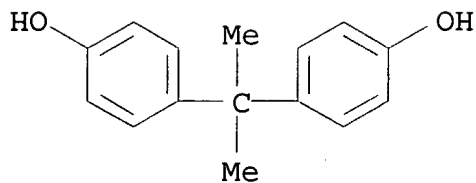
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



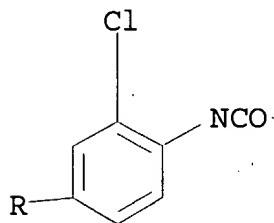
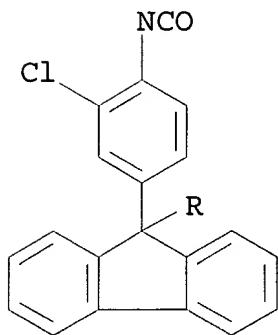
RN 143186-33-8 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, di-2-propenoate, polymer with 9,9-bis(3-chloro-4-isocyanatophenyl)-9H-fluorene and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 143182-95-0

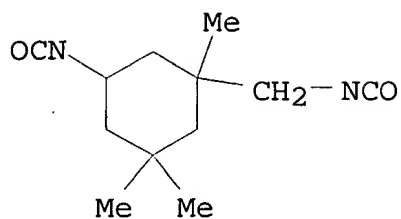
CMF C27 H14 Cl2 N2 O2



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

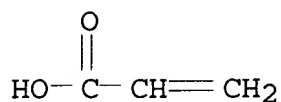
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

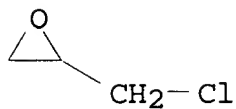
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

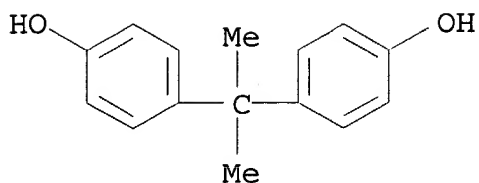
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



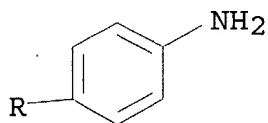
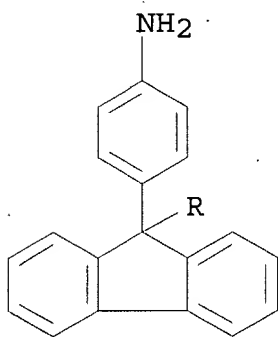
RN 143186-34-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, di-2-propenoate, polymer with 4,4'-(9H-fluoren-9-ylidene)bis[benzenamine] and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 15499-84-0

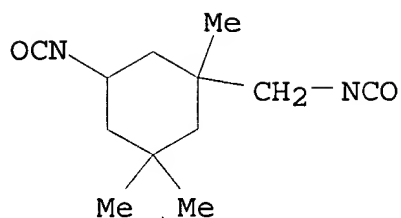
CMF C25 H20 N2



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

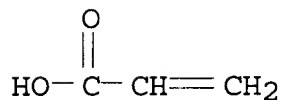
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

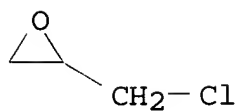
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

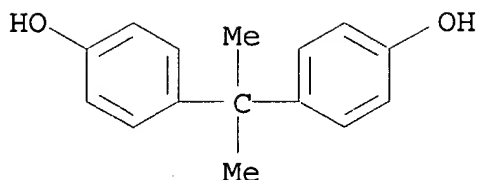
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



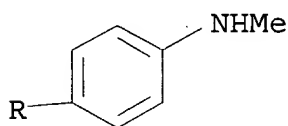
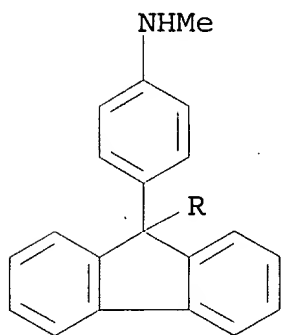
RN 143186-35-0 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, di-2-propenoate, polymer with cellulose acetate butanoate, (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] octadecanoate 2-propenoate, 4,4'-(9H-fluoren-9-ylidene)bis[N-methylbenzenamine] and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 107934-56-5

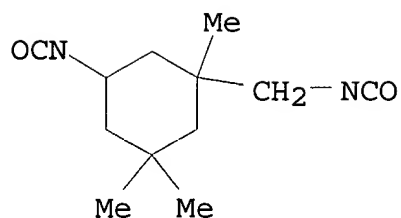
CMF C27 H24 N2



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

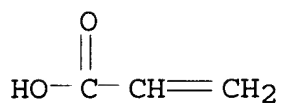
CRN 66746-11-0

CMF C18 H36 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

CRN 79-10-7

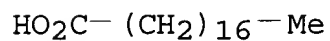
CMF C3 H4 O2



CM 5

CRN 57-11-4

CMF C18 H36 O2



CM 6

CRN 25068-38-6

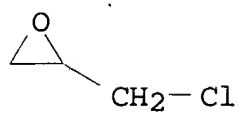
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 106-89-8

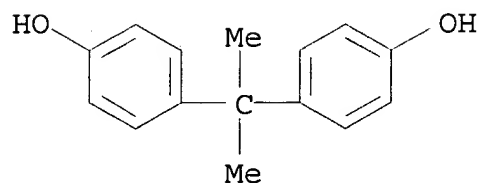
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

CMF C15 H16 O2



CM 9

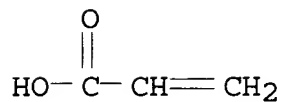
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 10

CRN 79-10-7

CMF C3 H4 O2



CM 11

CRN 25068-38-6

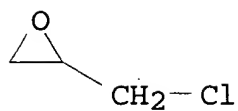
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 12

CRN 106-89-8

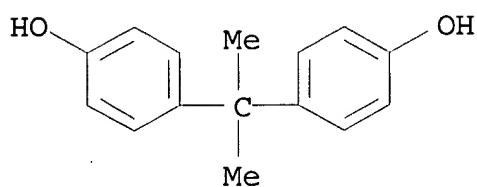
CMF C3 H5 Cl O



CM 13

CRN 80-05-7

CMF C15 H16 O2



CM 14

CRN 9004-36-8

CMF C4 H8 O2 . x C2 H4 O2 . x Unspecified

CM 15

CRN 9004-34-6

CMF Unspecified

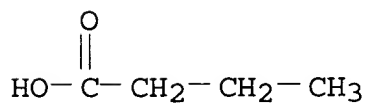
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 16

CRN 107-92-6

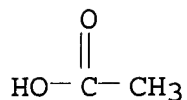
CMF C4 H8 O2



CM 17

CRN 64-19-7

CMF C2 H4 O2



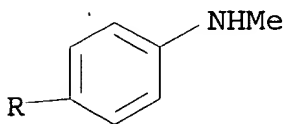
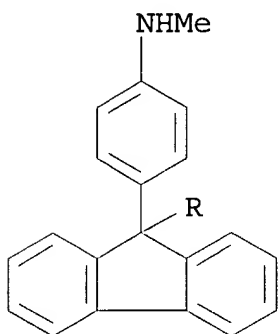
RN 143186-36-1 HCAPLUS

CN 1,3-Propanediol, bis(4-aminobenzoate), polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, 4,4'-(9H-fluoren-9-ylidene)bis[N-methylbenzenamine] and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 107934-56-5

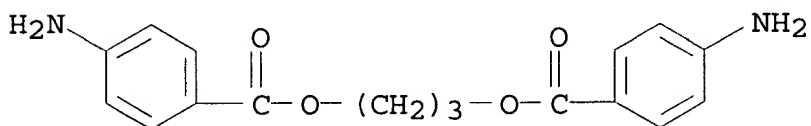
CMF C27 H24 N2



CM 2

CRN 57609-64-0

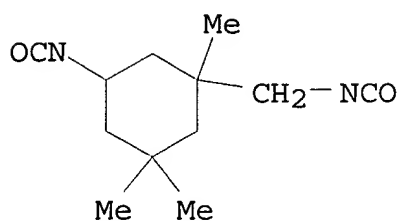
CMF C17 H18 N2 O4



CM 3

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 4

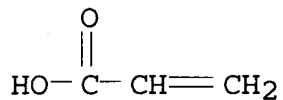
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 5

CRN 79-10-7

CMF C3 H4 O2



CM 6

CRN 25068-38-6

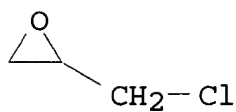
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 106-89-8

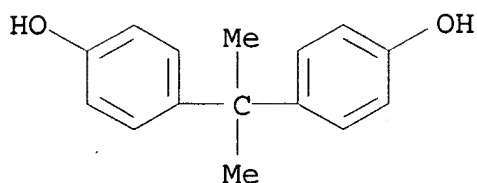
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

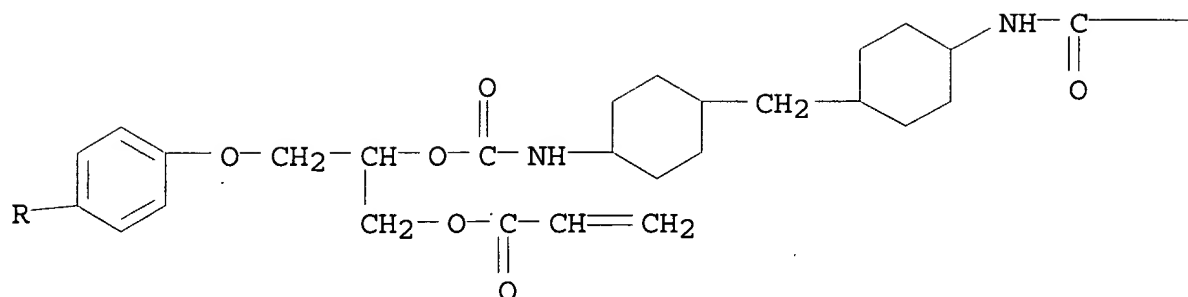
CMF C15 H16 O2



RN 143187-24-0 HCAPLUS

Poly[oxy[1-[[(1-oxo-2-propenyl) oxy] methyl]-1,2-ethanediyl]oxy-1,4-phenylene-9H-fluoren-9-ylidene-1,4-phenyleneoxy[2-[[(1-oxo-2-propenyl) oxy] methyl]-1,2-ethanediyl]oxycarbonylimino-1,4-cyclohexanediylmethylene-1,4-cyclohexanediyliminocarbonyl] (9CI)
 (CA INDEX NAME)

PAGE 2-A



RN 143206-09-1 HCAPLUS

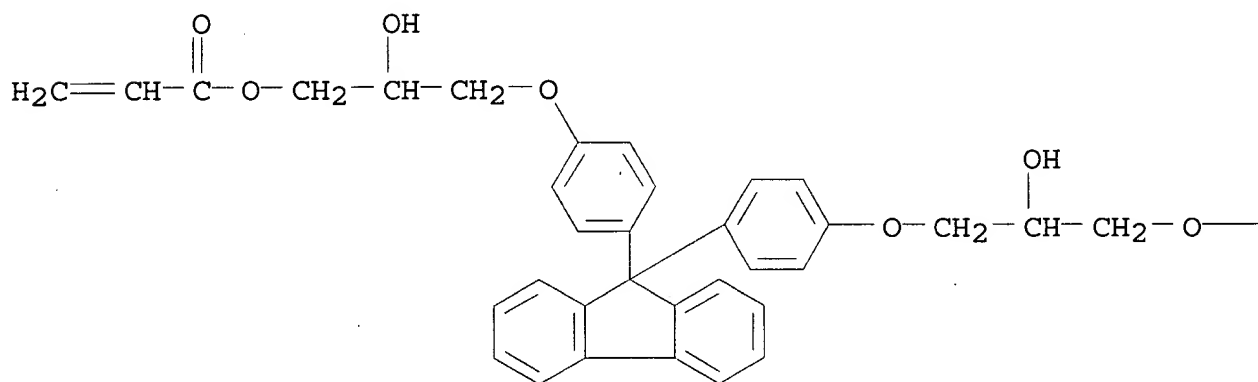
CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] octadecanoate 2-propenoate, and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

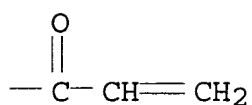
CRN 143182-97-2

CMF C37 H34 O8

PAGE 1-A



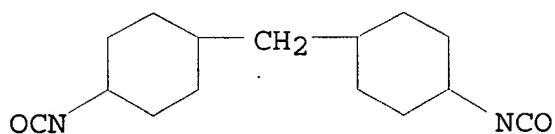
PAGE 1-B



CM 2

CRN 5124-30-1

CMF C15 H22 N2 O2



CM 3

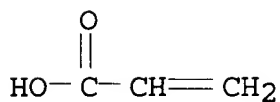
CRN 66746-11-0

CMF C18 H36 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

CRN 79-10-7

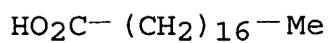
CMF C3 H4 O2



CM 5

CRN 57-11-4

CMF C18 H36 O2



CM 6

CRN 25068-38-6

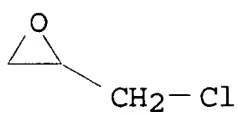
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 106-89-8

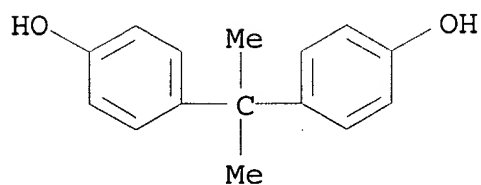
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

CMF C15 H16 O2



CM 9

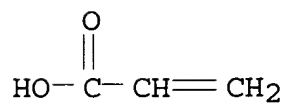
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 10

CRN 79-10-7

CMF C3 H4 O2



CM 11

CRN 25068-38-6

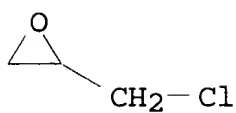
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 12

CRN 106-89-8

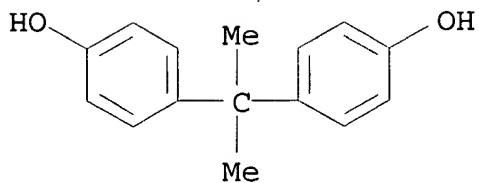
CMF C3 H5 Cl O



CM 13

CRN 80-05-7

CMF C15 H16 O2



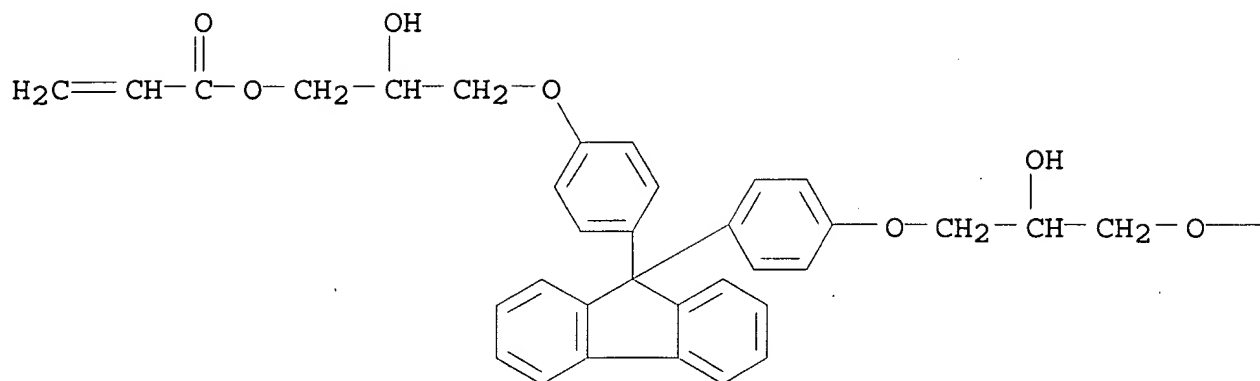
IT 143182-97-2P

(prepn. of, for radiation-curable binder for coatings)

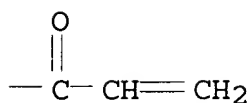
RN 143182-97-2 HCAPLUS

CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08B015-06
ICS B32B027-16
NCL 528075000
CC 42-10 (Coatings, Inks, and Related Products)
ST cardo polymer **polyurethane** coating; solvent resistant
coating **polyurethane**; photocurable unsatd
polyurethane; bisphenol diglycidyl ether diacrylate
polyurethane; fluorene deriv **polyurethane** prepn
IT **Urethane** polymers, preparation
(cardo, prepn. of, coatings, photocurable)
IT Coating materials
(heat-resistant, radiation-curable, cardo **polyurethanes**
, prepn. of)
IT Cardo polymers
(**polyurethanes**, prepn. of, coatings, photocurable)
IT 55127-80-5P 143186-23-6P 143186-24-7P
143186-25-8P 143186-26-9P 143186-27-0P
143186-28-1P 143186-29-2P 143186-30-5P
143186-31-6P 143186-32-7P 143186-33-8P
143186-34-9P 143186-35-0P 143186-36-1P
143187-24-0P 143206-09-1P
(prepn. of, coatings, photocurable)
IT 47522-51-0P 53814-24-7P 66746-11-0P 75835-96-0P 123896-29-7P

143182-94-9P 143182-95-0P 143182-96-1P 143182-97-2P
 143182-99-4P 143243-99-6P
 (prepn. of, for radiation-curable binder for coatings)

=> d 130 1-20 cbib abs hitstr hitind

L30 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2002 ACS

2002:708834 Document No. 137:224136 Base-amplifying unsaturated
urethane derivatives, their resins and compositions, and
 photolithography thereon. Ichimura, Kunihiro; Arimitsu, Koji
 (Japan). Jpn. Kokai Tokkyo Koho JP 2002265531 A2 20020918, 22 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-71013 20010313.

AB **Urethane** derivs. X(:CH₂)CO₂YNHCO₂CR₁R₂CR₃R₄H (X = H, Me; Y
 = bivalent org. group; R₁, R₂ = H, Me; R₃, R₄ = substituents
 satisfying Hammett's .sigma.m 0-0.85), their polymers, and their
 compns. contg. photobase generators and epoxides are claimed.
 Base-amplifying resins [CH₂CX(CO₂YNHCO₂CR₁R₂CR₃R₄H)]_m(CH₂CZA)_n (X,
 Y, R₁-4 = the same as above; A = radiation-sensitive base-generating
 group) and their compns. contg. base-reactive substances are also
 claimed. Photolithog. on the compns. for pos. or neg. patterns and
 bulk articles are further claimed.

IT 457627-36-0P 457627-37-1P

(novel base-amplifying unsatd. **urethane** derivs. for
 photoresists and photocurable moldings)

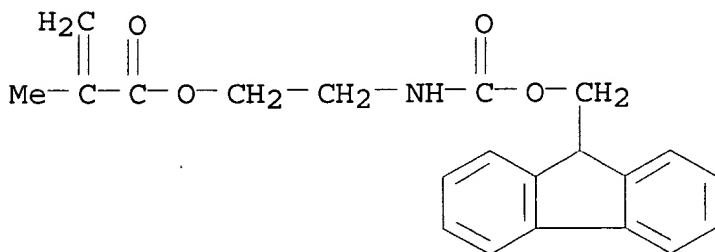
RN 457627-36-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(9H-fluoren-9-
 ylmethoxy)carbonyl]amino]ethyl ester, homopolymer (9CI) (CA INDEX
 NAME)

CM 1

CRN 457627-35-9

CMF C21 H21 N O4

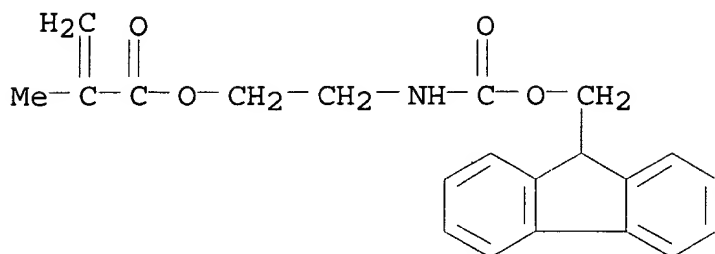


RN 457627-37-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(9H-fluoren-9-
 ylmethoxy)carbonyl]amino]ethyl ester, polymer with
 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

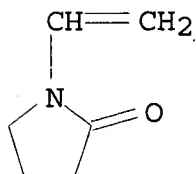
CM 1

CRN 457627-35-9
CMF C21 H21 N O4



CM 2

CRN 88-12-0
CMF C6 H9 N O



IC ICM C08F020-34
ICS C07C271-16; C08J005-18; C08K005-00; C08L033-14; C09K003-00;
G03F007-004; G03F007-028; G03F007-038
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
ST base amplifying methacryl **urethane** photoresist;
fluorenylmethyloxycarbonylaminoethyl methacrylate base amplified
photoresist photolithog
IT Photolithography
Photoresists
(novel base-amplifying unsatd. **urethane** derivs. for
photoresists and photocurable moldings)
IT 244056-46-0
(base amplifiers; novel base-amplifying unsatd. **urethane**
derivs. for photoresists and photocurable moldings)
IT 94589-41-0P 457627-35-9P 457627-40-6P
(in prepn. of base-amplifying unsatd. **urethane** derivs.
for neg. photoresists)
IT 109-78-4, 2-Cyanoethanol 24324-17-2, 9-Fluorenylmethanol
29674-47-3 30674-80-7, 2-**Isocyanatoethyl** methacrylate
(in prepn. of base-amplifying unsatd. **urethane** derivs.
for neg. photoresists)

IT 457627-36-0P 457627-37-1P 457627-38-2P
457627-39-3P
(novel base-amplifying unsatd. **urethane** derivs. for photoresists and photocurable moldings)

IT 25085-98-7, Celloxide 2021
(novel base-amplifying unsatd. **urethane** derivs. for photoresists and photocurable moldings)

IT 181885-13-2
(photobase generators; novel base-amplifying unsatd. **urethane** derivs. for photoresists and photocurable moldings)

L30 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2002 ACS
2001:451191 Document No. 135:62291 Heat- or light-curable heat-resistant fluorene polymer compositions. Mizuchi, Kazuhiko; Kawasato, Hironobu (Nippon Steel Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001166469 A2 20010622, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-347669 19991207.

AB The compns. comprise 100 parts alkali-sol. matrix resins involving those having fluorene backbones and 0.1-50 parts **urethane**-type fillers with mean particle diam. 1-10 .mu.m and compressive modulus .ltoreq.49 MPa (5 kg-f/mm2). The compns. are suitable for dielec. layers for multilayer printed circuit boards. Thus, 30 parts of a resin with inherent viscosity 0.2 dL/g and prepd. by reacting a bisphenol fluorene epoxy acrylate (ASF 400) 303, tetrahydrophthalic anhydride 38, and biphenyltetracarboxylic anhydride 73.5 parts was mixed with a tetramethylbiphenyl epoxy resin (Epikote YX 4000) 6, a polyfunctional acrylate (Kayarad TMPTA) 6, Michler's ketone 0.04, an initiator (Irgacure 651) 1, and a solvent 50 parts. A compn. contg. 300 g of the above resin mixt. and 30 g of **polyurethane** fine particles was spin-coated on a blackened Cu clad boards, dried, exposed to UV, developed with Na2CO3, post-cured, roughened, plated electrolessly then electrolytically, and annealed to give a test piece having conductor adhesion (90.degree. peeling strength) 700 g/cm. The developability of the resin (40-.mu.m thick) was 30 .mu.m (line/space). The resin had Tg 220.degree., resistance to thermal shock test (-55.degree. to +125.degree.) .gtoreq.1000 cycles, and tensile modulus 2156 MPa.

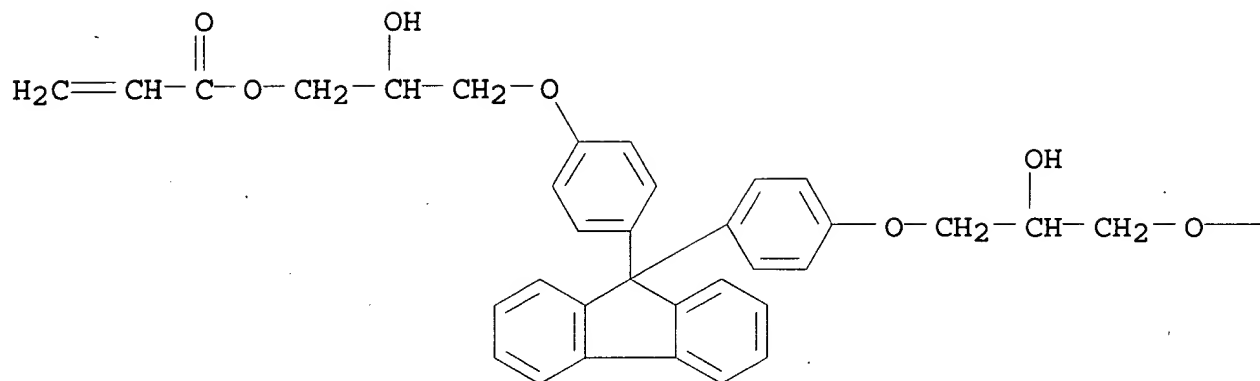
IT 311339-20-5P, ASF 400-biphenyltetracarboxylic anhydride-tetrahydrophthalic anhydride copolymer
(heat-resistant curable fluorene resin compns. contg. **polyurethane** particles for dielects. of printed circuits)

RN 311339-20-5 HCAPLUS
CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with [biisobenzofuran]-1,1',3,3'-tetrone and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

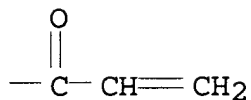
CM 1

CRN 143182-97-2
CMF C37 H34 O8

PAGE 1-A



PAGE 1-B



CM 2

CRN 59800-20-3

CMF C16 H6 O6

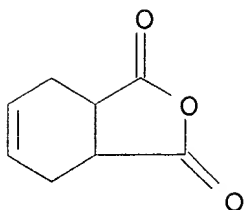
CCI IDS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 85-43-8

CMF C8 H8 O3



IT 345580-65-6P

(heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielects. of printed circuits)

RN 345580-65-6 HCAPLUS

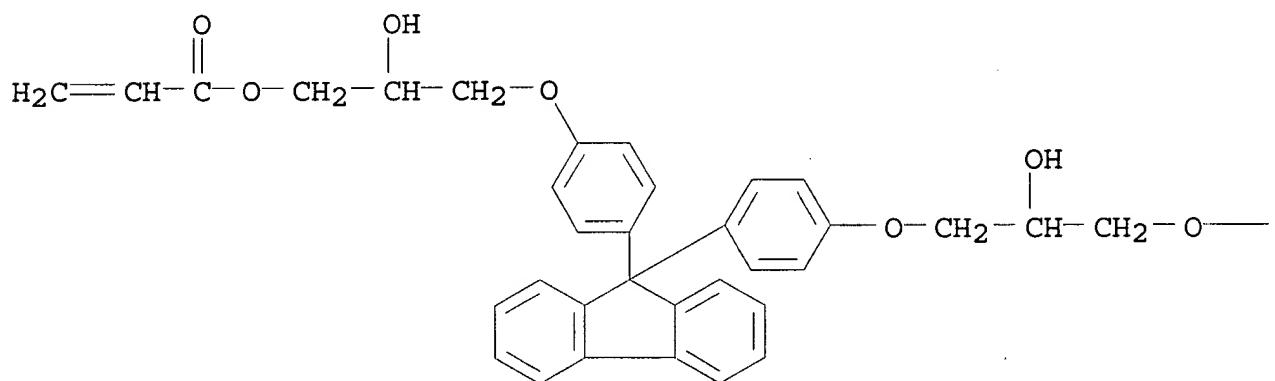
CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with [biisobenzofuran]-1,1',3,3'-tetrone, (chloromethyl)oxirane, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate, 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione and 3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diol (9CI) (CA INDEX NAME)

CM 1

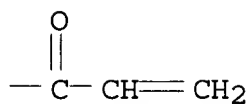
CRN 143182-97-2

CMF C37 H34 O8

PAGE 1-A



PAGE 1-B



CM 2

CRN 59800-20-3

CMF C16 H6 O6

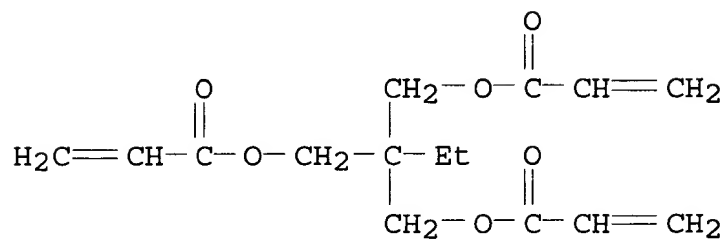
CCI IDS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 15625-89-5

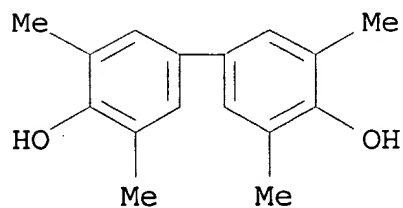
CMF C15 H20 O6



CM 4

CRN 2417-04-1

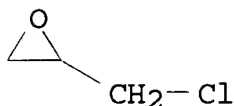
CMF C16 H18 O2



CM 5

CRN 106-89-8

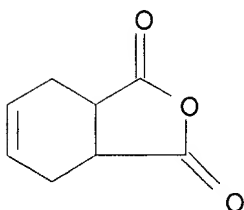
CMF C3 H5 Cl O



CM 6

CRN 85-43-8

CMF C8 H8 O3



IC ICM G03F007-027

ICS C08F020-30; C08K007-16; C08L075-04; C08L101-02; G03F007-004;
H05K003-46

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

ST fluorene epoxy resin acrylate photosensitive compn; alkali sol
fluorene epoxy resin acrylate; printed circuit dielec-fluorene epoxy
acrylate; **polyurethane** filler fluorene epoxy resin
acrylate

IT Epoxy resins, uses

(cardo, acrylates; heat-resistant curable fluorene resin compns.
contg. **polyurethane** particles for dielects. of printed
circuits)

IT Cardo polymers

(epoxy resins, acrylates; heat-resistant curable fluorene resin
compns. contg. **polyurethane** particles for dielects. of
printed circuits)

IT Fillers

Heat-resistant materials

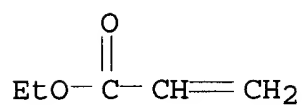
(heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielects. of printed circuits)IT **Polyurethanes**, uses

- (heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielecs. of printed circuits)
- IT Printed circuits
 (multilayer; heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielecs. of printed circuits)
- IT 311339-20-5P, ASF 400-biphenyltetracarboxylic
 anhydride-tetrahydrophthalic anhydride copolymer
 (heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielecs. of printed circuits)
- IT 345580-65-6P
 (heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielecs. of printed circuits)
- IT 15625-89-5, Kayarad TMPTA 66055-62-7, Epikote YX 4000
 (heat-resistant curable fluorene resin compns. contg.
polyurethane particles for dielecs. of printed circuits)
- L30 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 2001:347121 Document No. 134:367921 Curable resin compositions and
 their use as insulative interlayers or solder resists for
 semiconductor devices with good flexibility and resistance to
 soldering heat and chemicals. Mori, Tetsu; Matsuo, Yuichiro;
 Koyanagi, Takao; Yokoshima, Minoru (Nippon Kayaku Co., Ltd., Japan).
 Jpn. Kokai Tokkyo Koho JP 2001131242 A2 20010515, 12 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-312603 19991102.
- AB The compns. contain (A) the urethane oligomers derived from
 9,9-bis[4-(2-hydroxyalkoxy)phenyl]fluorene, other diol compds.,
 polybasic carboxylic acids having .gtoreq.2 acid anhydride groups,
 polyisocyanates and unsatd. group-contg. polyhydroxy compds., and
 (B) solvents beside other necessary components. Thus, mixing
 9,9-bis[4-(2-hydroxyethoxy)phenyl]fluorene 876 with
 polytetramethylene glycol 650, pyromellitic anhydride 436 and
 carbitol acetate 638.9 at 100.degree. for 10 h, combining the
 resulting product with TDI 348 g, reacting at 85.degree. for 15 h
 and modifying the remaining NCO group with 2-hydroxyethyl
acrylate gave a urethane **acrylate**, 87.5 parts of
 which was kneaded with a reaction product (65% solids content) of
 bisphenol F epoxy resin **acrylate** and succinic acid in
 carbitol acetate, 46.1, Irgacure 907 (photoinitiator) 10,
 diethylthioxantone 1.2, Kayarad DPHA 16, silica 10, melamine
 accelerator 1.2 and KS 66 (silicone defoamer) 1.0, and used with
 Epikote 1001 (epoxy resin) 66 parts to give a solder resist with
 good claimed properties.
- IT 80215-00-5P, Ethyl **acrylate**-2-ethylhexyl
acrylate-methacrylic acid-methyl
methacrylate copolymer
 (curable resin compns. and use as insulative interlayers or
 solder resists for semiconductor devices with good flexibility
 and resistance to soldering heat and chems.)
- RN 80215-00-5 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-propenoate,
 ethyl 2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

CRN 140-88-5

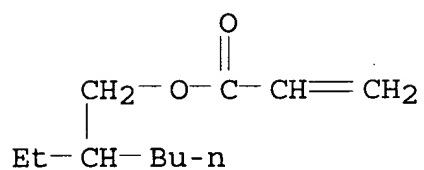
CMF C5 H8 O2



CM 2

CRN 103-11-7

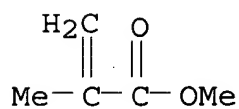
CMF C11 H20 O2



CM 3

CRN 80-62-6

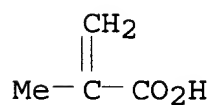
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



IT 339524-48-0DP, 9,9-Bis[4-(2-hydroxyethoxy)phenyl]fluorene-polytetramethylene glycol-pyromellitic dianhydride-TDI block

copolymer ester with 2-hydroxyethyl **acrylate**, reaction products with 2-hydroxyethyl **acrylate**

(oligomeric; curable resin compns. and use as insulative interlayers or solder resists for semiconductor devices with good flexibility and resistance to soldering heat and chems.)

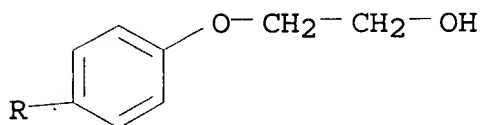
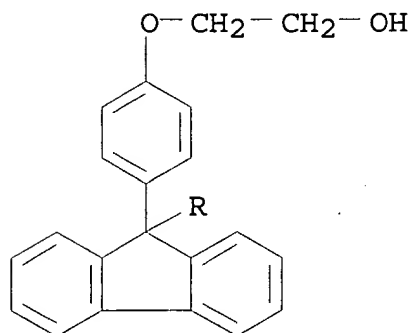
RN 339524-48-0 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 1,3-diisocyanatomethylbenzene, 2,2'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[ethanol] and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 117344-32-8

CMF C29 H26 O4

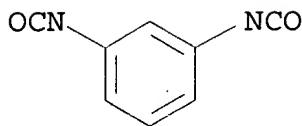


CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



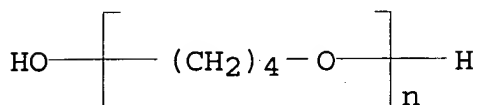
D1-Me

CM 3

CRN 25190-06-1

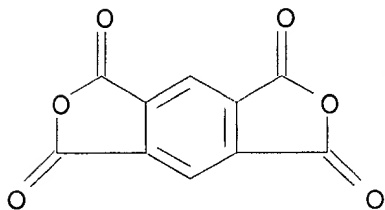
CMF (C₄ H₈ O)_n H₂ O

CCI PMS



CM 4

CRN 89-32-7

CMF C₁₀ H₂ O₆

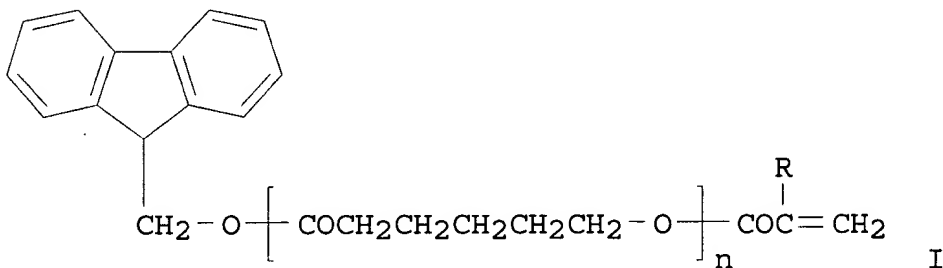
IC ICM C08F290-06
 ICS C08F002-50; C08F299-06; C08G018-67; C08G059-16; G03F007-027;
 H05K003-46; C09D004-00; C09D163-00; C09D175-04; H05K003-28
 CC 38-3 (Plastics Fabrication and Uses)
 ST elec insulator curable resin compn heat resistance; solder resist
 heat chem resistance urethane oligomer **acrylate**
 IT 64176-48-3P, Bisphenol F-epichlorohydrin copolymer **acrylate**
 80215-00-5P, Ethyl **acrylate**-2-ethylhexyl
acrylate-methacrylic acid-methyl
methacrylate copolymer
 (curable resin compns. and use as insulative interlayers or
 solder resists for semiconductor devices with good flexibility)

and resistance to soldering heat and chems.)
 IT 818-61-1DP, reaction products with 9,9-bis[4-(2-hydroxyethoxy)phenyl]fluorene-PTMG-TDI-pyromellitic dianhydride copolymer 339524-48-ODP, 9,9-Bis[4-(2-hydroxyethoxy)phenyl]fluorene-polytetramethylene glycol-pyromellitic dianhydride-TDI block copolymer ester with 2-hydroxyethyl **acrylate**, reaction products with 2-hydroxyethyl **acrylate**

(oligomeric; curable resin compns. and use as insulative interlayers or solder resists for semiconductor devices with good flexibility and resistance to soldering heat and chems.)

L30 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 2000:865360 Document No. 134:29781 (Meta)**acrylic** esters, resin composition therewith useful for lenses, and cured products thereof. Ozaki, Toru; Shimura, Katsunori; Yokoshima, Minoru (Nippon Kayaku Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000344716 A2 20001212, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-155655 19990602.

GI



AB The (meth)**acrylic** esters are represented by the general formula I, where R = H or Me and n = 1-5, and the resin compns. comprise I, unsatd. compds. other than I, and optionally photoinitiators. Thus, a compn. comprising **acrylate** obtained by reacting 9-fluorenylmethanol, .epsilon.-caprolactone, and **acrylic** acid 60, **urethane acrylate** obtained by reacting polyester diol of neopentyl glycol and adipic acid, ethylene glycol, tolylene **diisocyanate**, and 2-hydroxyethyl **acrylate** 30, and Irgacure 184 3 parts was molded and cured with UV to give a Fresnel lens showing good mold releasability and refractive index 1.587.

IT 312300-84-8P 312300-85-9P 312300-86-0P
 312487-85-7P 312487-86-8P 312487-90-4P,
 Ethylene glycol-caprolactone-2-hydroxyethyl **acrylate**
 -poly(tetramethylene glycol)-tolylene **diisocyanate**
 -tribromophenyloxyethyl **acrylate** block graft copolymer,
 ester with 9-fluorenylmethanol 312487-92-6P, Adipic
 acid-caprolactone-ethylene glycol-2-hydroxyethyl **acrylate**

-neopentyl glycol-poly(tetramethylene glycol)-tolylene
diisocyanate-tribromophenyl **methacrylate** block
 graft copolymer, ester with 9-fluorenylmethanol
 (prepn. of resin compns. comprising (meta)**acrylic**
 esters)

RN 312300-84-8 HCAPLUS

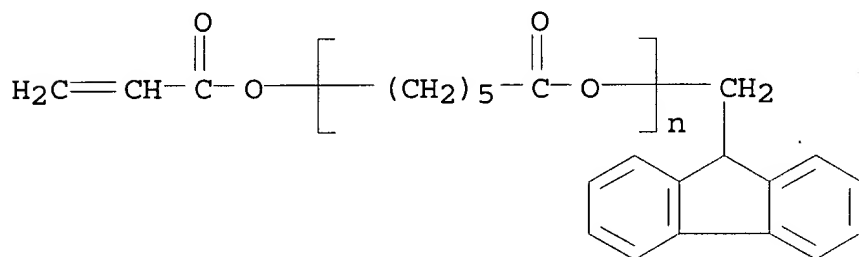
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,
 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, .alpha.-(9H-fluoren-9-
 ylmethyl)-.omega.-[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-
 hexanediyl)] and 2-hydroxyethyl 2-propenoate, block, graft (9CI)
 (CA INDEX NAME)

CM 1

CRN 312300-83-7

CMF (C6 H10 O2)n C17 H14 O2

CCI PMS

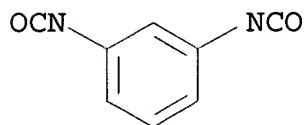


CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

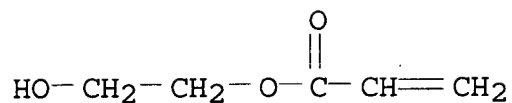


D1-Me

CM 3

CRN 818-61-1

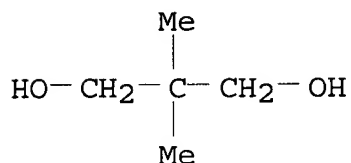
CMF C5 H8 O3



CM 4

CRN 126-30-7

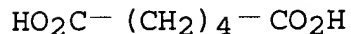
CMF C5 H12 O2



CM 5

CRN 124-04-9

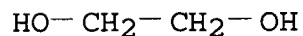
CMF C6 H10 O4



CM 6

CRN 107-21-1

CMF C2 H6 O2



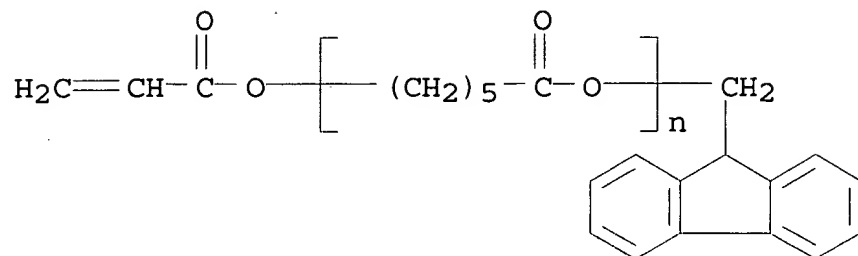
RN 312300-85-9 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 1,3-diisocyanatomethylbenzene, 1,2-ethanediol, .alpha.-(9H-fluoren-9-ylmethyl)-.omega.-[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)], .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl) and 2-(tribromophenoxy)ethyl 2-propenoate, block, graft (9CI) (CA INDEX NAME)

CM 1

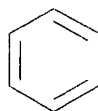
CRN 312300-83-7

CMF (C6 H10 O2)n C17 H14 O2
 CCI PMS

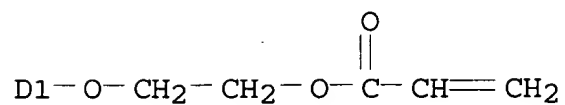


CM 2

CRN 54363-46-1
 CMF C11 H9 Br3 O3
 CCI IDS

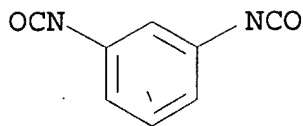


3 (D1-Br)



CM 3

CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



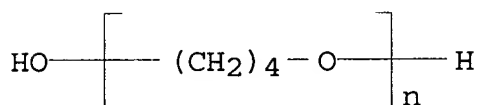
D1-Me

CM 4

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

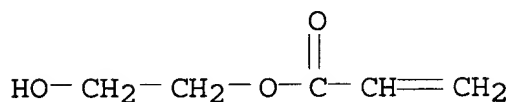
CCI PMS



CM 5

CRN 818-61-1

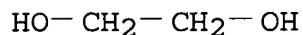
CMF C5 H8 O3



CM 6

CRN 107-21-1

CMF C2 H6 O2



RN 312300-86-0 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, .alpha.-(9H-fluoren-9-ylmethyl)-.omega.-[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)], .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate and tribromophenyl 2-methyl-2-

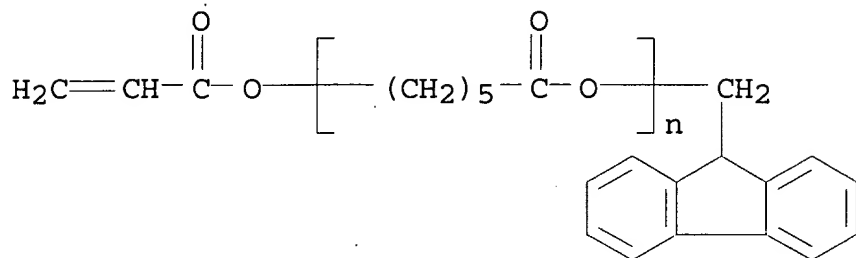
propenoate, block, graft (9CI) (CA INDEX NAME)

CM 1

CRN 312300-83-7

CMF (C6 H10 O2)n C17 H14 O2

CCI PMS

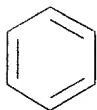


CM 2

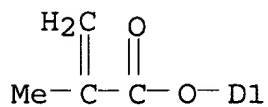
CRN 51156-89-9

CMF C10 H7 Br3 O2

CCI IDS



3 (D1-Br)

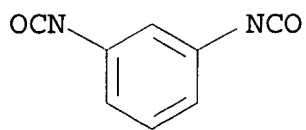


CM 3

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



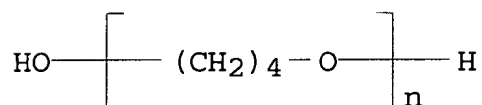
D1-Me

CM 4

CRN 25190-06-1

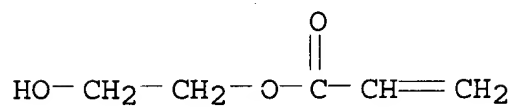
CMF (C₄ H₈ O)_n H₂ O

CCI PMS



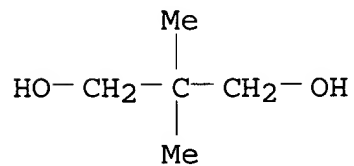
CM 5

CRN 818-61-1

CMF C₅ H₈ O₃

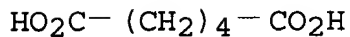
CM 6

CRN 126-30-7

CMF C₅ H₁₂ O₂

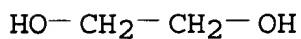
CM 7

CRN 124-04-9
CMF C6 H10 O4



CM 8

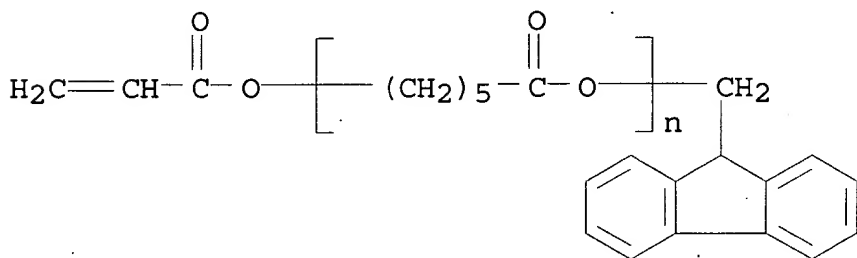
CRN 107-21-1
CMF C2 H6 O2



RN 312487-85-7 HCAPLUS
CN 2-Propenoic acid, 2-(tribromophenoxy)ethyl ester, polymer with
.alpha.-(9H-fluoren-9-ylmethyl)-.omega.-[(1-oxo-2-
propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)] and
(chloromethyl)oxirane polymer with 4,4'-(1-
methylethylidene)bis[phenol] di-2-propenoate (9CI) (CA INDEX NAME)

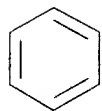
CM 1

CRN 312300-83-7
CMF (C6 H10 O2)_n C17 H14 O2
CCI PMS

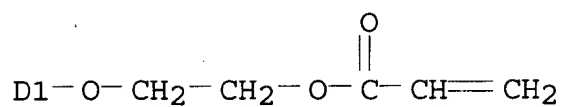


CM 2

CRN 54363-46-1
CMF C11 H9 Br3 O3
CCI IDS



3 (D1-Br)



CM 3

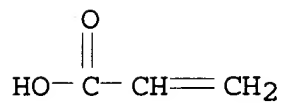
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

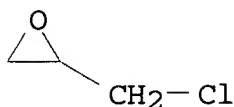
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

CRN 106-89-8

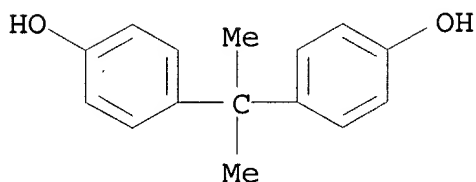
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



RN 312487-86-8 HCAPLUS

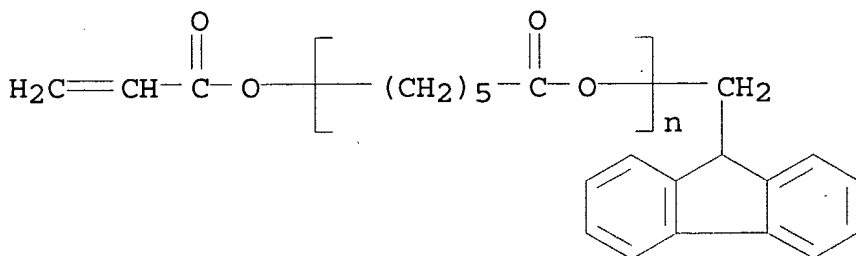
CN Hexanedioic acid, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, .alpha.-(9H-fluoren-9-ylmethyl)-.omega.-[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)], 2-hydroxyethyl 2-propenoate and tribromophenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 312300-83-7

CMF (C6 H10 O2)_n C17 H14 O2

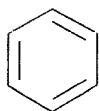
CCI PMS



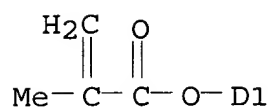
CM 2

CRN 51156-89-9

CMF C10 H7 Br3 O2
CCI IDS

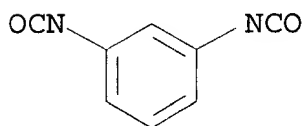


3 (D1-Br)



CM 3

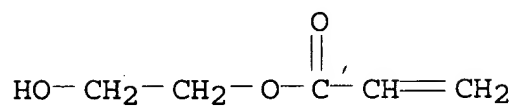
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

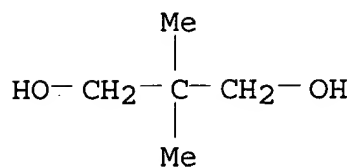
CM 4

CRN 818-61-1
CMF C5 H8 O3



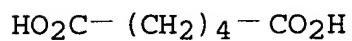
CM 5

CRN 126-30-7
 CMF C5 H12 O2



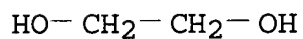
CM 6

CRN 124-04-9
 CMF C6 H10 O4



CM 7

CRN 107-21-1
 CMF C2 H6 O2

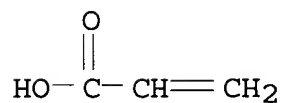


CM 8

CRN 53814-24-7
 CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 9

CRN 79-10-7
 CMF C3 H4 O2

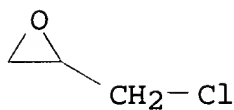


CM 10

CRN 25068-38-6
 CMF (C15 H16 O2 . C3 H5 Cl O)x
 CCI PMS

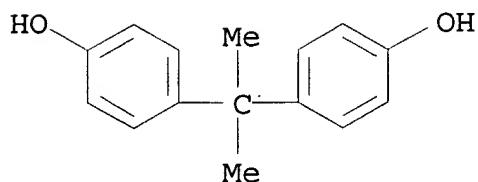
CM 11

CRN 106-89-8
 CMF C3 H5 Cl O



CM 12

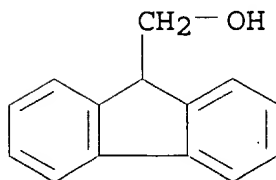
CRN 80-05-7
 CMF C15 H16 O2



RN 312487-90-4 HCAPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 1,3-diisocyanatomethylbenzene, 1,2-ethanediol, .alpha.-hydro-.omega.-
 hydroxypoly(oxy-1,4-butanediyl), 2-oxepanone and
 2-(tribromophenoxy)ethyl 2-propenoate, 9H-fluoren-9-ylmethyl ester,
 block, graft (9CI) (CA INDEX NAME)

CM 1

CRN 24324-17-2
 CMF C14 H12 O



CM 2

CRN 312487-89-1

CMF (C11 H9 Br3 O3 . C9 H6 N2 O2 . C6 H10 O2 . C5 H8 O3 . (C4 H8 O)n H2 O . C2 H6 O2)x

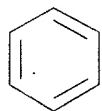
CCI PMS

CM 3

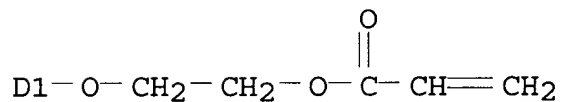
CRN 54363-46-1

CMF C11 H9 Br3 O3

CCI IDS



3 (D1-Br)

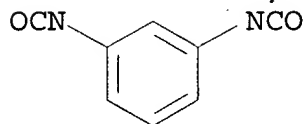


CM 4

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



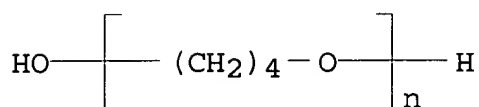
D1-Me

CM 5

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

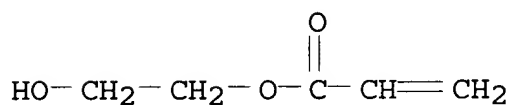
CCI PMS



CM 6

CRN 818-61-1

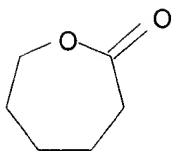
CMF C5 H8 O3



CM 7

CRN 502-44-3

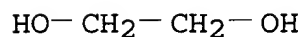
CMF C6 H10 O2



CM 8

CRN 107-21-1

CMF C2 H6 O2



RN 312487-92-6 HCAPLUS

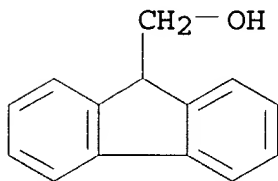
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,
2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, .alpha.-hydro-.omega.-
hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate,

2-oxepanone and tribromophenyl 2-methyl-2-propenoate,
9H-fluoren-9-ylmethyl ester, block, graft (9CI) (CA INDEX NAME)

CM 1

CRN 24324-17-2

CMF C14 H12 O



CM 2

CRN 312487-91-5

CMF (C10 H7 Br3 O2 . C9 H6 N2 O2 . C6 H10 O4 . C6 H10 O2 . C5 H12 O2 . C5 H8 O3 . (C4 H8 O)n H2 O . C2 H6 O2)x

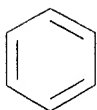
CCI PMS

CM 3

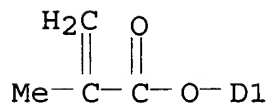
CRN 51156-89-9

CMF C10 H7 Br3 O2

CCI IDS

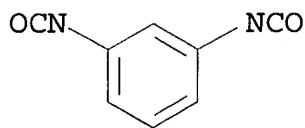


3 (D1-Br)



CM 4

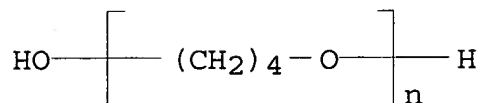
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

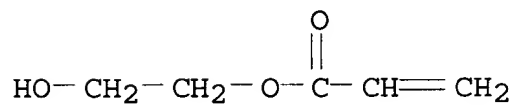
CM 5

CRN 25190-06-1
 CMF (C₄ H₈ O)_n H₂ O
 CCI PMS



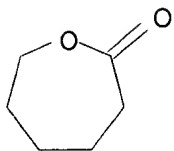
CM 6

CRN 818-61-1
 CMF C₅ H₈ O₃



CM 7

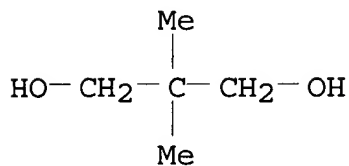
CRN 502-44-3
 CMF C₆ H₁₀ O₂



CM 8

CRN 126-30-7

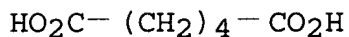
CMF C5 H12 O2



CM 9

CRN 124-04-9

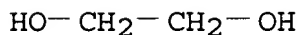
CMF C6 H10 O4



CM 10

CRN 107-21-1

CMF C2 H6 O2



- IC ICM C07C069-54
 ICS C08F002-50; C08L033-06; G02B001-04; G02B003-06; G02B003-08;
 G02C007-02
- CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 38
- ST **acrylic** ester resin crosslinked lens prepn
- IT **Polyurethanes**, preparation
 (**acrylic**-epoxy-polyester-; prepn. of resin compns.
 comprising (meta)**acrylic** esters)
- IT Polyesters, preparation

- (**acrylic-epoxy-polyurethane-**; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polyurethanes**, preparation
(**acrylic-polyester-**, block, graft; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT Epoxy resins, preparation
(**acrylic-polyester-**; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polyurethanes**, preparation
(**acrylic-polyester-polyoxyalkylene-**, block, graft; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polyoxyalkylenes**, preparation
(**acrylic-polyester-polyurethane-**, block, graft; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT Epoxy resins, preparation
(**acrylic-polyester-polyurethane-**; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polyesters**, preparation
(**acrylic-polyoxyalkylene-polyurethane-**, block, graft; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polyesters**, preparation
(**acrylic-polyurethane-**, block, graft; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Polymerization catalysts**
(photopolymn.; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT **Lenses**
(prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT 947-19-3, Irgacure 184
(photoinitiator; prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT 312300-83-7P 312487-93-7P, Caprolactone homopolymer, ester with 9-fluorenylmethanol and **acrylic** acid
(prepn. of (meta)**acrylic** esters)
- IT 312300-84-8P 312300-85-9P 312300-86-0P
312487-85-7P 312487-86-8P 312487-90-4P,
Ethylene glycol-caprolactone-2-hydroxyethyl **acrylate**
-poly(tetramethylene glycol)-tolylene **diisocyanate**
-tribromophenyloxyethyl **acrylate** block graft copolymer,
ester with 9-fluorenylmethanol 312487-92-6P, Adipic
acid-caprolactone-ethylene glycol-2-hydroxyethyl **acrylate**
-neopentyl glycol-poly(tetramethylene glycol)-tolylene
diisocyanate-tribromophenyl **methacrylate** block
graft copolymer, ester with 9-fluorenylmethanol
(prepn. of resin compns. comprising (meta)**acrylic** esters)
- IT 24324-17-2, 9-Fluorenylmethanol
(reactant; prepn. of (meta)**acrylic** esters)

L30 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2002 ACS

2000:819171 Document No. 133:363588 (Meth)**acrylate** esters, their ultraviolet-curable compositions, and their cured products for lenses with high refractive index. Ozaki, Toru; Yokoshima, Minoru (Nippon Kayaku Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000319336 A2 20001121, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-131009 19990512.

AB The compns., useful for optical lenses, eyeglasses, etc., contain 9-fluorenylmethyl (meth)**acrylate**, which shows low viscosity and high refractive index, and unsatd. compds. Thus, a compn. of 60 parts 9-fluorenylmethyl **acrylate** [viscosity (25.degree.) 580 cP, refractive index (23.degree.) 1.606] and 30 parts adipic acid-ethylene glycol-neopentyl glycol-TDI copolymer terminated with 2-hydroxyethyl **acrylate** was injected in a mold and cured by UV radiation to give a Fresnel lens with refractive index 1.610 and good mold releasability and dimensional precision.

IT 307925-96-8P 307925-97-9P 307925-98-0P
307930-40-1P, 9-Fluorenylmethyl **acrylate**-Kayarad R
114-tribromophenoxyethyl **acrylate** copolymer
307930-41-2P, Adipic acid-ethylene glycol-9-fluorenylmethyl **acrylate**-2-hydroxyethyl **acrylate**-Kayarad R
114-neopentyl glycol-TDI-tribromophenyl **methacrylate** copolymer
(UV-curable (meth)**acrylate** ester compns. for lenses with high refractive index)

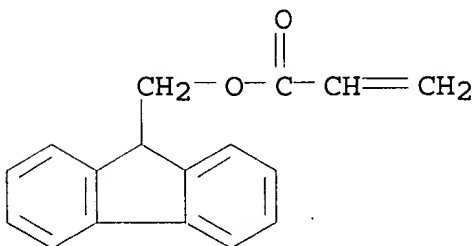
RN 307925-96-8 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 9H-fluoren-9-ylmethyl 2-propenoate and 2-hydroxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 138981-57-4

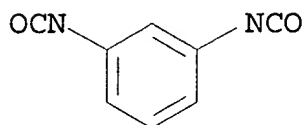
CMF C17 H14 O2



CM 2

CRN 26471-62-5

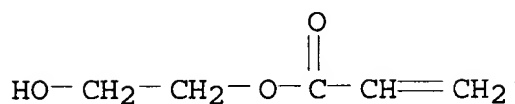
CMF C9 H6 N2 O2
CCI IDS



D1-Me

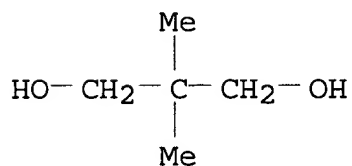
CM 3

CRN 818-61-1
CMF C5 H8 O3



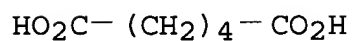
CM 4

CRN 126-30-7
CMF C5 H12 O2



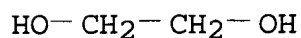
CM 5

CRN 124-04-9
CMF C6 H10 O4



CM 6

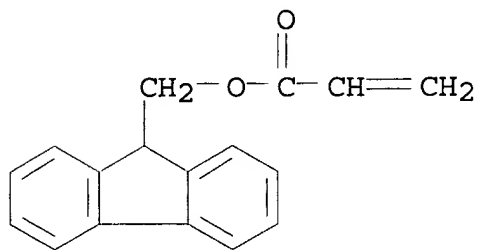
CRN 107-21-1
CMF C2 H6 O2



RN 307925-97-9 HCAPLUS
CN 2-Propenoic acid, 9H-fluoren-9-ylmethyl ester, polymer with
1,3-diisocyanatomethylbenzene, 1,2-ethanediol, .alpha.-hydro-.omega.-
hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate and
2-(tribromophenoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

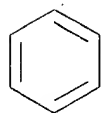
CM 1

CRN 138981-57-4
CMF C17 H14 O2

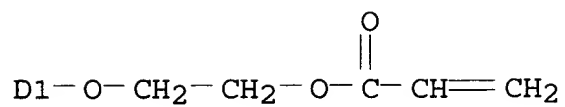


CM 2

CRN 54363-46-1
CMF C11 H9 Br3 O3
CCI IDS



3 (D1-Br)

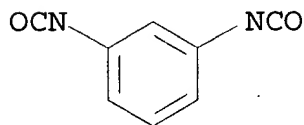


CM 3

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



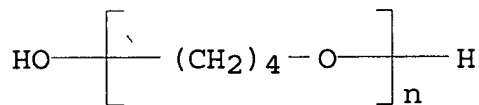
D1-Me

CM 4

CRN 25190-06-1

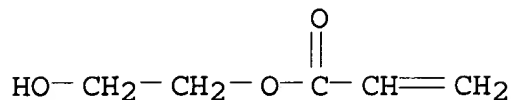
CMF (C4 H8 O)_n H2 O

CCI PMS



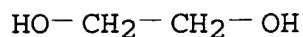
CM 5

CRN 818-61-1
CMF C5 H8 O3



CM 6

CRN 107-21-1
CMF C2 H6 O2

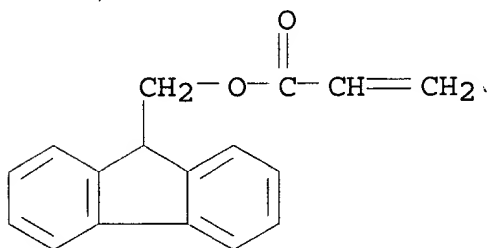


RN 307925-98-0 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 9H-fluoren-9-ylmethyl 2-propenoate, .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate and tribromophenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

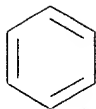
CM 1

CRN 138981-57-4
CMF C17 H14 O2

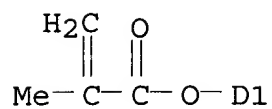


CM 2

CRN 51156-89-9
CMF C10 H7 Br3 O2
CCI IDS

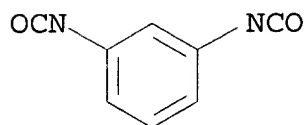


3 (D1- Br)



CM 3

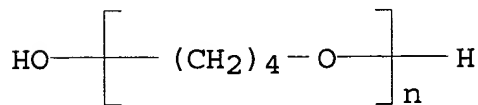
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

CM 4

CRN 25190-06-1
 CMF (C4 H8 O)_n H2 O
 CCI PMS



CM 5